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ORIGINAL
(Red)

R-51-5-2-15

FINAL
SCREENING SITE INSPECTION

LINFIELD INDUSTRIAL PARK

EPA WORK ASSIGNMENT NO. 37-34-3JZZ
PROJECT NO. 3263-09
EPA DSN PA-2898
FACILITY ID NO. PAD987332814

ARCS III PROGRAM
EPA CONTRACT NO. 68-W8-0037

SEPTEMBER 1992

HALLIBURTON NUS
Environmental Corporation

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FOR THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 9, 1992

SUBMITTED BY	REVIEWED BY	APPROVED BY
(b) (4)	(b) (4)	(b) (4)
SITE MANAGER	PROJECT MANAGER	PROGRAM MANAGER, ARCS III

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SECTION 1.0

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1.0 INTRODUCTION

1.1 AUTHORIZATION

HALLIBURTON NUS Environmental Corporation performed this work under EPA Contract No. 68-W8-0037. This specific report was prepared in accordance with ARCS III Work Assignment No. 37-34-3JZZ for the Linfield Industrial Park Site, located in Linfield, Montgomery County, Pennsylvania.

1.2 SCOPE OF WORK

HALLIBURTON NUS Environmental Corporation (formerly NUS Corporation) ARCS III was tasked to conduct a site inspection of the subject site.

1.3 SUMMARY

The Linfield Industrial Park Site is located south of Linfield - Trappe Road, east of the Schuylkill River bridge, in Montgomery County, Pennsylvania. The residential town of Linfield is adjacent to and northeast of the site; state game lands are east of and adjacent to the site.

The abandoned 125-acre industrial park is situated on mostly flat land on the eastern banks of the Schuylkill River. The western and southern portions of the site have a five- to 10-percent slope toward the Schuylkill River. Access to the site is restricted by a fence and a main gate; however, the fence does not completely surround the site. The site is composed of approximately six separate divisions: the main gate and parking area, the distillery area, the building no. 2 area, the warehouse area, the concrete pads area, and the former tank farm area.

The site has been inactive since 1986. The current owner, 888 Warehousing, Incorporated, is attempting to find a lessee or buyer for the property.

From an unknown date until 1986, building no. 2 was used for the repackaging and distribution of ethylene glycol (antifreeze) and ammonia-based cleaners. These materials were transported to the facility by rail car and tanker trucks, transferred to smaller containers, and distributed off site for sale. Evidence at the site indicates that one-gallon plastic containers may have been manufactured on site for the distribution of the antifreeze and cleaner products.

Beginning in approximately 1945, the facility operated as a United-States-Government-bonded whiskey warehousing operation. The storage and distribution of whiskey comprised the main operation. Above-ground storage tanks provided the initial storage. Whiskey was then transferred to wooden kegs for aging in the warehouses. After the aging process, the whiskey was bottled and labeled at the site. It is not known how long this operation existed at the site.

For an undetermined period (probably beginning in the early 1800s), the facility was operated as a distillery of whiskey products. Storage, aging, and distribution of the whiskey products occurred at the site.

Inspections conducted by the Pennsylvania Department of Environmental Resources (PA DER) in 1972, 1973, 1975, 1983, 1984, and 1985 revealed unauthorized discharges of industrial wastewater to the Schuylkill River. The industrial wastewater consisted of deionizer wastewater, septic tank seepage, trash-compactor oils, bottle-making room oils, air compressor pit waste oil, and non-contact cooling compressor water. Additionally, the deionizer wastewater backwash and regeneration wastes were discharged after neutralization into a lime pit. From an unknown date until 1987, the facility was issued two NPDES permits for an outfall to the Schuylkill River. The NPDES discharge point was analyzed by PA DER on March 7, 1985 and revealed elevated levels of biochemical oxygen demand (BOD).

Groundwater and surface water are the sources of potable water for individuals residing in the four-mile-radius area surrounding the Linfield Industrial Park Site. The Citizens' Utilities Home Water Company (CUHWC) supplies water to a total population of 12,506 people in the study area. The water is obtained from an intake in the Schuylkill River (b) (9)

(b) (9)
(b) (9) The Pottstown Municipal Water Authority (PMWA) supplies water to approximately 9,000 people in the study area. The water is obtained from an intake located upstream in the Schuylkill River, outside the study area. Approximately 19,831 persons are assumed to obtain their water from (b) (9)

(b) (9)

The Schuylkill River is adjacent to the southern and western boundaries of the site. PA DER lists the Schuylkill River as protected for the maintenance and/or propagation of fish species indigenous to warm water and for the passage, maintenance, and propagation of migratory fishes.

ORIGINAL (Red)

Adjacent to and downstream from the site are palustrine, forested, broad-leaved, deciduous, temporarily non-tidal flooded wetlands with three linear miles of frontage.

On February 19, 1991, HALLIBURTON NUS Field Investigation Team 3 (FIT 3) conducted a preliminary assessment of the Linfield Industrial Park. During the inspection, HALLIBURTON NUS FIT 3 observed several areas of concern: 21 above-ground storage tanks, two underground storage tanks that contained unknown oils, 75 to 100 fifty-five-gallon drums (many drums were empty, although at least 25 drums were not empty; 1 tar-like spill was observed), two power transformers, one gas pump, five tanker trucks (at least one truck was still hooked to the building via a discharge line), and 20 abandoned buildings. Based on these observations, EPA Emergency Response was contacted.

EPA Emergency Response performed an emergency assessment of the site on March 14, and 27, 1991. Before the assessment, the site owner informed the on-scene coordinator (OSC) that many of the drums observed by the FIT had been moved into an on-site warehouse. The large on-site holding tanks were found to be empty. Numerous drums and containers were found in the various on-site buildings. Four drums were sampled, and a soil sample was taken near a transformer The OSC planned to work with the site owner to address safety concerns posed by the unrestricted site access and the materials haphazardly stored on site.

HALLIBURTON NUS ARCS III conducted a screening site inspection on January 30, 1992. Activities included sampling on-site surface soils and surface water and off-site groundwater and surface water. The results of the samplings, as shown in section 7.0 and discussed in section 8.0, revealed elevated levels of organic and inorganic contaminants including fluoranthene (72,000 ppb), benzo(a)pyrene (30,000 ppb), polychlorinated biphenyls (PCBs) (300,000 ppb), and lead (4,810 ppm) in on-site soil and elevated levels of inorganic contaminants including lead (59.90 ppb) and cyanide (11.70 ppb) in off-site surface water.

SECTION 2.0

2.0 THE SITE

2.1 LOCATION

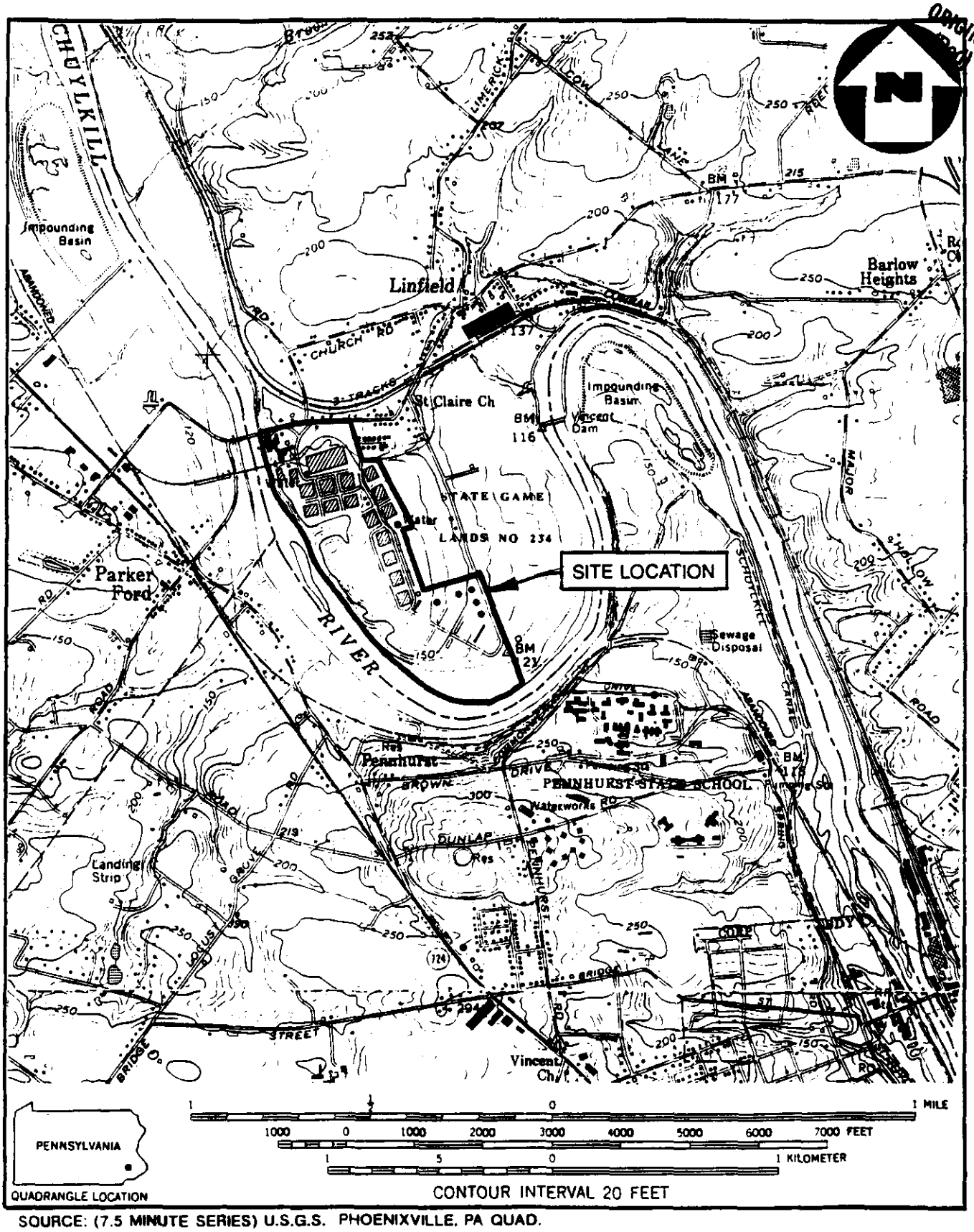
The Linfield Industrial Park Site is located immediately south of the Linfield - Trappe Road and east of the Schuylkill River bridge in Montgomery County, Pennsylvania (see figure 2.1, page 2-2). The site, which is south of Linfield, Pennsylvania, can be found on the United States Geological Survey (U.S.G.S.) Phoenixville, Pennsylvania 7.5 minute series topographic map at the coordinates 40° 12' 08" north latitude and 75° 34' 38" west longitude. As measured from the southwestern corner of the Phoenixville, Pennsylvania topographic map, the site is approximately 6-3/4 inches east and 14 inches north.[1,2,3]

2.2 SITE LAYOUT

The 125-acre industrial park site is located immediately off Linfield - Trappe Road, south of Linfield, Pennsylvania. The site is bordered to the south and west by the Schuylkill River, to the east by State Game Land No. 234, and to the north and northeast by the residential town of Linfield. ConRail Corporation railroad tracks are located in the town of Linfield, north of the site; abandoned tracks are throughout the site (see figure 2.2, page 2-3).[2]

The site can be divided into six divisions: the fenced parking lot, the distillery area (distillery building, office/storehouse, abandoned house, leachate field, and other buildings), building no. 2 or the ethylene glycol area, the warehouses, the concrete pads, and the former tank farm.[2]

Located on the northeastern portion of the site is a paved access road that leads from Linfield - Trappe Road to a 200- by 75-foot parking lot on site. A guardhouse was adjacent to the main gate. A chain-link fence separated the parking lot from the facility. An abandoned tanker truck was northwest of the guardhouse at the time of the preliminary assessment.[2] The guardhouse was not occupied at the time of the site inspection.[4]



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. PHOENIXVILLE, PA QUAD.

SITE LOCATION MAP

LINFIELD INDUSTRIAL PARK, LINFIELD, PA.

SCALE 1: 24000

FIGURE 2.1

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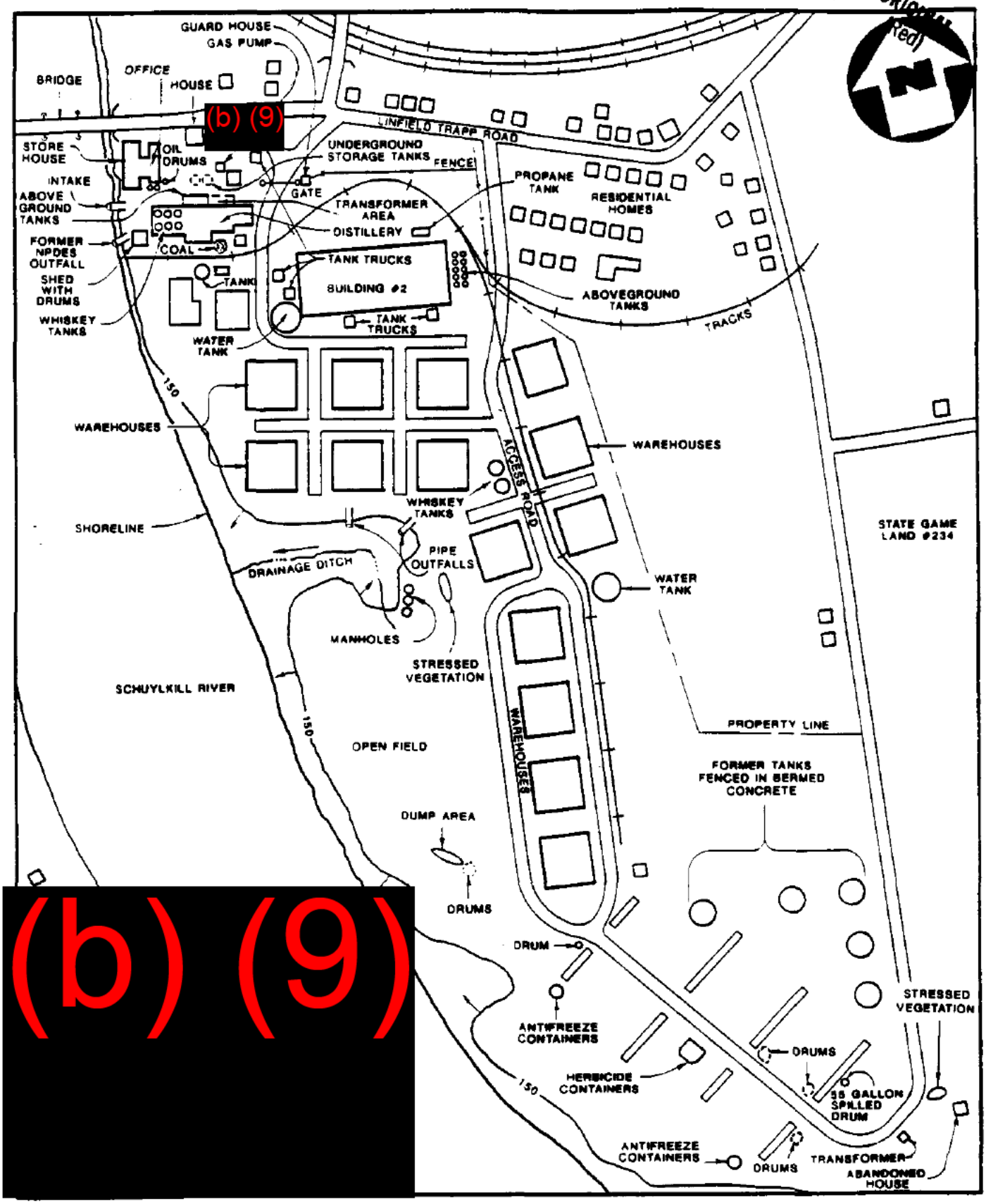

SITE SKETCH

FIGURE 2.2

LINFIELD INDUSTRIAL PARK, LINFIELD, PA.

(NO SCALE)

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Located on the northwestern portion of the site was the two-story former distillery building. At the time of the preliminary assessment, the distillery and the area surrounding it consisted of eight whiskey vats, oil and grease drums, five above-ground storage tanks, an oven and smoke stack with a coal pile, a transformer, and abandoned trucks. The distillery building housed the equipment used in the whiskey manufacturing process, including approximately eight empty (11,700-gallon capacity each) wooden fermentation vats. Adjacent to the distillery building on the northern side were five above-ground metal cylinder storage tanks. Three of these tanks hold approximately 5,284 gallons each; the two remaining tanks hold approximately 939 gallons each. The contents of these tanks are not known. Adjacent to and east of these tanks were an electrical transformer unit, and an area of stained soils was noted. Several 55-gallon drums of oil and grease were observed in this area during the preliminary assessment. On the southern side of the distillery building was a coal pile that was approximately 10 by 15 by six feet in size (150 square feet of ground surface area was covered). A stoker oven, east of the coal pile, had piping and a smoke stack attached to the southern side of the building.[2]

North of the distillery was an abandoned house. Adjacent to the eastern side of the house was an inactive well, and south of the house was a gas pump.[2]

An office/storehouse building was located northwest of the distillery. Pipes led to the Schuylkill River from the western side of the building. Two underground storage tanks, approximately 10,000 gallons each, containing oil-like liquids were located east of the building; the underground storage tanks could be accessed through manhole covers. At the time of the preliminary assessment, several 55-gallon drums were located near the southern side of the building; at least two drums were full and marked "Used Oil." At the bottom of the hill, adjacent to the Schuylkill River and west of the building, was a concrete underground open pit that appeared to be a surface water intake. A pump and pipeline system with a broken screen on top were observed.[2]

South of the office/storehouse and west of the distillery building was a leachate field with vent stacks. A 12- by 12-foot building was located in this area. A small generator with indications of stained soils was observed in this area. Ten 55-gallon drums of oil and varnish were located inside the building. West of the leachate field was the former NPDES outfall. South of the outfall, abandoned railroad tracks crossed over the river.[2]

South of the distillery building were two buildings and several abandoned trucks. At the time of the preliminary assessment, the eastern building contained personnel lockers and pumping equipment. The contents of the western building are not known. A large above-ground tank, 30 by 50 feet in size, with an approximately 264,231-gallon capacity, was located adjacent to the buildings. The trucks in this area were a New York Fire Department truck and several trailer trucks.[2]

In the north-central portion of the site was building no. 2 or the ethylene glycol area. This building was reportedly used primarily for ethylene glycol bottling and distribution. East of the building were 10 fenced, black, above-ground metal cylinder storage tanks, six by 40 feet in size, with an 8,455-gallon capacity. The contents of these tanks are not known. One white above-ground metal cylinder storage tank, five by 30 feet in size, with an approximately 4,400-gallon capacity, was located on the northeastern side of the building. This white tank contained plastic white pellets. These white pellets were also on the ground around the tank. One brushed aluminum above-ground metal cylinder storage tank, five by 10 feet in size, with a 1,467-gallon capacity, was located here also. A white above-ground propane storage tank was located 200 feet north of the building. A loading dock was on the northern side of building no. 2. Four abandoned tanker trucks were observed adjacent to the building. One truck on the southern side of the building was connected to the building via its discharge pipe. The contents of the tankers are not known. West of building no. 2 was a water tower.[2]

Located centrally on the site and south of building no. 2 was the warehouse area. The 14 warehouse buildings (three-story and windowless) were formerly used for the storage of whiskey barrels. Two above-ground aluminum cylinder storage tanks, 40 by 50 feet in size, with an approximately 469,244-gallon capacity, and one above-ground metal cylinder tank, eight by 15 feet in size, with a 3,637-gallon capacity, were located centrally among these warehouses. The contents of these tanks are not known. A water tower was located in this area. Pipelines insulated in asbestos-like material (some pipelines had collapsed) connected the warehouses.[2]

During the site inspection, a trash dump measuring approximately 30 by 75 feet and consisting mostly of empty plastic antifreeze containers was observed between the southernmost warehouse and the Schuylkill River. Adjacent to this area were approximately 60 upright empty and rusted drums. No markings were visible on the drums.[4]

A drainage swale that led to the Schuylkill River was in a low-lying area west of the warehouses in the middle of the site. The swale originated at the outfall of a large concrete pipe. Several smaller pipe outfalls and three concrete-lidded manholes were also in this area. In an open field east of this area was an approximately 20- by 100-foot area of stressed vegetation.[4]

Located on the southwestern part of the site were eight concrete pads. These 30- by 250-foot concrete roads extended to the east and west from a main north-south-trending on-site road. Demolished wooden buildings were observed at each pad area. At least twenty-two 55-gallon drums contained an unknown liquid at the time of the preliminary assessment. Four drums were near the northwestern pad area, and eight drums were located near the southeastern pad area. One 55-gallon drum contained an oil-like residue, which had spilled and stained the ground. Several dump sites on these pads consisted of antifreeze containers, piles of antifreeze jugs and melted plastics, roofing materials, and miscellaneous wastes. Throughout the area were whiskey bottles and wooden barrels. A 12- by 12-foot building was observed west of the main road and between two concrete pads. Five 5-gallon containers marked "Herbicide" were observed in this building during the preliminary assessment. The contents of the containers are not known. Southeast of the concrete pad areas was an abandoned house. At this location, a small electrical transformer was observed.[2]

During the site inspection, an approximately 100- by 100-foot area of stressed vegetation was observed northwest of the abandoned house. This area was quantitatively identical to the stressed vegetation west of the middle warehouses.[4]

Located northeast of the concrete pad areas was a former tank farm. Five former tanks areas, which were individually fenced and bermed in concrete, were located in this area of the site. The tanks were not present during the preliminary assessment; however, the concrete containment areas still existed.[2]

2.3 OWNERSHIP HISTORY

The Linfield Industrial Park Site has been owned by 888 Warehousing, Incorporated, of Brooklyn, New York, since 1986. The park is closed and is not utilized for any purpose.[2,5]

Before 1986, the site was owned by Publicker Industries, Incorporated, of Philadelphia, Pennsylvania. The site representative, Bernard Shafran, stated that Mr. Publicker had owned the site since at least sometime after World War II. During the ownership by Publicker, the site was operated under different names: Continental Distilling Corporation, Publicker Packaging Services, Publicker Industries, and Linfield Industrial Park. There is no record to indicate who owned the park before Mr. Publicker.[6,7,8]

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ConRail Consolidated Corporation, of Philadelphia, Pennsylvania, apparently owns the rail lines throughout the site. According to the HALLIBURTON NUS FIT 3 Limerick Township site discovery, the tax office of Limerick, Pennsylvania shows the property tax as being paid by ConRail.[3]

2.4 SITE USE HISTORY

The site has been inactive since June 1986. The current owner, 888 Warehousing, Incorporated, has no immediate plans for the site unless a lessee or buyer can be found.[2,5]

For an undetermined time until 1986, building no. 2 was used to repackage and distribute ethylene glycol (antifreeze) and ammonia-based cleaners. These materials were transported to the facility by rail car and tanker trucks, transferred to smaller containers, and distributed off site for sale. Evidence at the site indicates that one-gallon plastic containers for antifreeze and cleaners may have been manufactured on site.[2,3,9]

For an undetermined time beginning in approximately 1945, the facility was operated as a United-States-Government-bonded whiskey warehousing operation. The storage and distribution of whiskey were the main operations. Above-ground storage tanks were the initial means of storage. Whiskey was then transferred to wooden kegs for aging in the warehouses. HALLIBURTON NUS FIT 3 observed that many wooden kegs in various stages of construction and wooden keg pieces were stockpiled, indicating that these wooden kegs were built on site. After the aging process, the whiskey was bottled and labeled at the site. The bottled whiskey product was distributed by rail cars and trucks.[2]

The facility was once operated as a whiskey distillery. Although the dates of this operation are not known, the distillery building appears to have been constructed in the early 1800s. Large vats were present in the distillery building. Storage, aging, and distribution of the whiskey products were the main operations.[2]

The site use before the distillery was constructed is not known.

2.5 PERMIT AND REGULATORY ACTION HISTORY

Permit and regulatory action relevant to the subject site is discussed chronologically below:

On September 5, 1972, a violation of the Clean Streams Law was documented by PA DER after an inspection on August 15, 1972 revealed several discharges from the company to the Schuylkill River without a permit. These discharges included deionized wastewater, cooling water, sink wastewater, water-softener waste, and septic-tank seepage.[8] According to PA DER correspondence dated January 22, 1974, on January 11, 1973, PA DER sent information to Continental Distilling Corporation (the operating name of the site at this time) detailing the information needed to apply for the industrial wastewaters. No record of results was found. On October 31, 1973, an inspection by PA DER revealed that the facility was still in violation of the Clean Streams Law because of unauthorized discharges. On January 22, 1974, PA DER acknowledged that no information had been received to date from Continental Distilling Corporation regarding permit application.[10]

On February 7, 1974, an administrative conference was held between PA DER and Continental Distilling Corporation. During the conference, Continental Distilling submitted the NPDES permit project status cards. On February 8, 1974, PA DER determined that a payment of $250 to the Clean Water Fund by Continental Distilling Corporation would be considered as final settlement of all claims for the violations of the Clean Streams Law noted during the inspection conducted on February 27, 1973.[11]

On February 10, 1975, PA DER requested updated NPDES permit project schedule cards and the completion of a permit application.[12] According to correspondence dated July 10, 1975, on February 26, 1975, PA DER had acknowledged the receipt of NPDES permit schedule cards from Continental Distilling Corporation. The NPDES permit application was not submitted.[13]

On April 21, 1975, PA DER conducted an inspection of the Continental Distilling Corporation facility; the inspection revealed that the facility's septic system was overflowing. Samples were obtained during the inspection. One discharge from the site had a BOD of more than 80 ppm, and another discharge from the site had a BOD of more than 300 ppm and an ethyl glycol content more than 280 ppm.[13] The BOD results indicate the amount of dissolved oxygen used up by the sample when incubated in darkness at 20°C for five days.[14] It is not documented who took the samples or where the samples were analyzed. PA DER considered both discharges from the site to be violations of the Clean Streams Law because they were unpermitted discharges.[13]

On July 10, 1975, PA DER requested letter notification from Continental Distilling Corporation of the status of its NPDES permit application, the treatment or elimination of contaminated waste discharges, and the facility's plan to correct the septic system problem.[13]

On March 19, 1976, an administrative conference was held between PA DER and Continental Distilling Corporation. The following topics were covered: tile field overflows, unpermitted industrial waste discharges, NPDES application, NPDES permit project status schedule cards, and the Pollution Incident Prevention Plan (PIPP). PA DER required that the old septic tank connected with the old tile field be pumped out as soon as the new tile field was in operation. PA DER requested that updated NPDES permit project status schedule cards and an NPDES permit application be submitted. No specifics were stated regarding the PIPP.[15]

On April 6, 1976, NPDES project status schedule cards were accepted by PA DER.[16] According to correspondence dated July 13, 1979, on May 18, 1979, PA DER requested a resubmission of the industrial waste permit application for reissue of NPDES Permit No. PA0013293.[17]

On July 13, 1979, PA DER required Continental Distilling Corporation to submit a Part II (or better) permit for the discharges to the groundwater via the limestone pit adjacent to warehouse no. 10 and recommended that a treatment facility be used for neutralization and suspended solids removal.[17]

On January 11, 1983, PA DER notified Continental Distilling Corporation that the expiration date of NPDES Permit No. PA0013293 was July 12, 1983.[18]

On April 27, 1983, PA DER conducted an inspection that revealed the discharge of non-contact compressor cooling water to a storm sewer tributary to the Schuylkill River. On May 5, 1983, PA DER advised Publicker Industries that such unauthorized surface water discharges were occurring. The Part I NPDES application was enclosed with this letter.[19]

On January 22, 1985, PA DER issued a letter to Publicker Industries regarding a December 6, 1984 inspection that had been conducted by PA DER in response to citizens' complaints that eye and nasal irritation occurred to persons walking near the cooling water discharge. The inspection revealed that the company was processing "CLEAN JOB," an ammonia-based cleaner. Samples obtained during the visit revealed a BOD more than 405 ppm and phenol concentrations of 5.0 ppb.[20]

On May 8, 1985, PA DER confirmed the results of an inspection that had been conducted by PA DER on March 7, 1985. Samples obtained during the inspection revealed that the non-contact cooling water discharged to outfall no. 001 contained a BOD concentration of 11.5 ppm, which violated the terms of NPDES Permit No. PA0013293. The source of contamination was not determined.[21]

On August 13, 1985, PA DER confirmed the results of an inspection that had been conducted by PA DER on July 17, 1985. The inspection results revealed the following sources of potential pollution at the site that could impact the outfall no. 001 discharge to the Schuylkill River: a floor drain in the blending room leading to outfall no. 001, oil tankers with stained soils into the storm sewer, oils in air compressor pit discharge into outfall no. 001, trash compactor oils near the storm sewer inlet, and oil leaks in the bottle room that were discharged to the ground. These conditions were determined by PA DER to be violations of the Clean Streams Law. No Notices of Violation or penalties were filed, however.[22]

On May 11, 1987, PA DER requested a renewal application for Publicker Packaging Company's NPDES Permit No. PA0013293; the current permit would expire on December 23, 1988.[23]

On February 19, 1991, HALLIBURTON NUS FIT 3 conducted a preliminary assessment inspection of the Linfield Industrial Park Site.[2]

EPA Emergency Response performed an emergency assessment of the site on March 14 and 27, 1991. Many of the drums observed by the FIT had been moved into an on-site warehouse by the site owner. During the first EPA Emergency Response site visit, during which on-site buildings were not accessed, the following were noted on site: five drums containing material, four truck trailers, three tankers, and an abandoned barn containing transformer carcasses. Stained soil near a transformer field tested positive for PCB contamination greater than 50 ppm. During the second site visit, on-site buildings were investigated. Numerous drums and containers were found inside the various buildings, including containers of sulfuric acid, drums and containers marked "Flammable," containers of liquid caustic materials, thousands of small containers filled with antifreeze, drums of methanol, and a drum marked "Toluene." The buildings were secure and locked. Five samples were taken during the assessment: four were drawn from drums and one was taken from the soil near the transformer. The results of the sample analyses are not known. The large on-site holding tanks were found to be empty. No removal or enforcement action was conducted.[24,25,26]

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2.6 REMEDIAL ACTION TO DATE

On September 9, 1985, Publicker Packaging Services contacted PA DER regarding potential pollution sources revealed in PA DER's August 1985 inspection of potential impacts on NPDES outfall no. 001 to the Schuylkill River. The following comments were offered by Publicker Packaging Services:[7,27]

- The floor drains in the blending area had been sealed off from the blending pit since early 1985. The drains empty into a sump from which material is pumped into a holding tank for disposal. There is a by-pass valve in the line to the holding tank, which, if opened, would allow material to flow into the blending pit. This branch was sealed off to prevent any accidental discharges.

- The ground area at the bottle-making room was immediately dug out. The soil had been disposed through the Boyertown Landfill facility. The quantity of removed soil is not known.

On July 14, 1975, Continental Distilling Corporation contacted PA DER regarding ethyl alcohol found in one of the discharges. The following comment was offered by Continental Distilling Corporation:[28]

- A contractor was proposed to be hired for the removal of the existing tile field and the excavation of 150 square feet of soil and for the installation of a new stone base and tile, cover, and fill. It is not known if these activities were completed. The quantity of contaminated soil removed is not known.

On December 23, 1985, Publicker Packaging Services contacted PA DER regarding corrective actions taken in response to a spill on December 14, 1985. The following comments were offered by Publicker Packaging Services:[29]

- All residual antifreeze had been vacuumed or picked up with absorbent material. Eldredge Waste Management, of West Chester, Pennsylvania, had flushed and removed residual antifreeze from the drain system. A valve had been installed to prevent any liquids from entering the pipeline. The quantity of contaminated material removed is not known.

No other remediation has taken place at the site.

SECTION 3.0

3.0 ENVIRONMENTAL SETTING

3.1 WATER SUPPLY

Residents within the study area rely on surface water and groundwater sources for their potable water supplies. CUHWC serves residents in and around the boroughs of Spring City and Royersford within the study area and relies on surface water and groundwater sources of supply. PMWA serves residents in the northwestern part of the study area and relies upon a surface water source of supply. PBWS serves a very small number of residents in the extreme southeastern part of the study area and relies upon a surface water source of supply The remaining residents of the study area are assumed to maintain private wells or springs for their drinking water supply.[1,30,31,32]

CUHWC supplies water within the boroughs of Spring City and Royersford and to small areas of neighboring East Coventry, East Vincent, Limerick, and Upper Providence Townships. Water for this system is obtained from an intake on the Schuylkill River and from three wells. Some water is also purchased from PBWS. The Schuylkill River intake is located directly across the river from the site (b) (9)

(b) (9)

(b) (9) Water source withdrawal and purchase data for report year 1989 are shown below.[1,30,31,32,33,34,35,36,37]

CUHWC Source	Withdrawal/ Purchase (gallons per day)	Number of Days	1989 Total	Percent of System (1989 Total)
Schuylkill River	817,000	248	202,616,000	38.2
(b) (9)	210,000	306	64,260,000	12.1
	302,000	121	36,542,000	6.9
	612,000	350	214,200,000	40.4
Purchase PBWS	35,100	365	12,811,500	2.4
TOTAL	**1,453,000**	**365**	**530,429,500**	**100.00**

The CUHWC system is fully integrated and supplies water to a total population of 12,506 persons.[1,30,31,32,33,34,35,36,37]

PMWA supplies water to the borough of Pottstown and to portions of neighboring North Coventry and Lower Pottsgrove Townships within the study area. PMWA draws 100 percent of its water supply from an intake on the Schuylkill River located (b) (9) PMWA does not purchase water from or sell water to other public water suppliers. A total population of 31,500 persons is supplied with water by PMWA.[1,30,31,32,37,38]

The Phoenixville Borough Water System (PBWS) supplies water to the borough of Phoenixville, the community of Mont Clare, and small areas of East Pikeland and Schuylkill Townships. PBWS draws 100 percent of its water supply from an intake on the Schuylkill River (b) (9) (b) (9) PBWS supplies water to a total population of 20,000 persons and sells water to CUHWC.[1,32,37,39,40]

The Philadelphia Suburban Water Company (PSWC) maintains a surface water intake on the Schuylkill River (b) (9) PSWC maintains an integrated system supplying water to 222,660 residential connections in areas of Chester, Delaware, and Montgomery Counties. Water for the integrated system is drawn from 37 active wells, five surface water intakes, and a groundwater reservoir located in a former quarry. Water is also purchased from the Pennsylvania - American Water Company (PAWC) - Norristown District and the West Chester Area Municipal Authority. Water source withdrawals and purchase data for report year 1990 are summarized below.[1,41,42,43,44,45,46]

PSWC Source	Withdrawal/ Purchase (gallons per day)	Number of Days	Percent of Total Purchases and Withdrawals
37 wells combined	13,670,000	365	14.8
Upper Merion Reservoir	6,160,000	365	6.7
Crum Creek	20,000,000	365	21.6
Pickering Creek	5,420,000	365	5.9
Perkiomen Creek	19,500,000	365	21.1
Neshaminy Creek	9,590,000	365	10.4
Schuylkill River	11,400,000	365	12.3
Purchases	6,660,000	365	7.2
TOTAL	**92,400,000**	**365**	**100.00**

PSWC also sells water to the Malvern Borough Water Department, PAWC Norristown District, the North Wales Water Authority, and the Hatboro Borough Authority.[1,41,42,43,44,45,46]

The majority of the private domestic wells in the area produce water from the (b) (9) Formation. The remaining wells produce from the (b) (9) (b) (9) Wells in the (b) (9) Formation of Limerick Township have median depths of (b) (9) and a median yield of 15 gallons per minute (gpm). (b) (9) (b) (9) (b) (9) [redacted] 1,30,32,36,47

3.2 SURFACE WATERS

The Schuylkill River is adjacent to the southern and western boundaries of the site.[1,2] Surface drainage from the site is expected to travel southwestward and flow into the Schuylkill River.[2] The former NPDES outfall is in the northwestern part of the site. Violations of the Clean Water Act have been found during inspections of this outfall by PA DER since 1972.[2,8,10,12, 13, 15, 16, 17, 22]

PA DER lists the Schuylkill River as protected for the maintenance and/or propagation of fish species indigenous to a warm-water habitat and for the passage, maintenance, and propagation of migratory fishes.[48] The Schuylkill River has an average flow of 1,888 cubic feet per second (cfs).[49] The site is located within the 100-year flood-prone area of the Schuylkill River.[50]

Immediately downstream from the site are palustrine, forested, broad-leaved, deciduous, temporarily non-tidal flooded wetlands with approximately three linear miles of frontage.[51]

CUHWC utilizes an intake in the Schuylkill River. T(b) (9)
PBWS maintains a surface water intake (b) (9)
PSWC maintains a surface water intake (b) (9)

3.3 HYDROGEOLOGY

The geologic and hydrogeologic conditions in the study area were researched as part of the site inspection. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

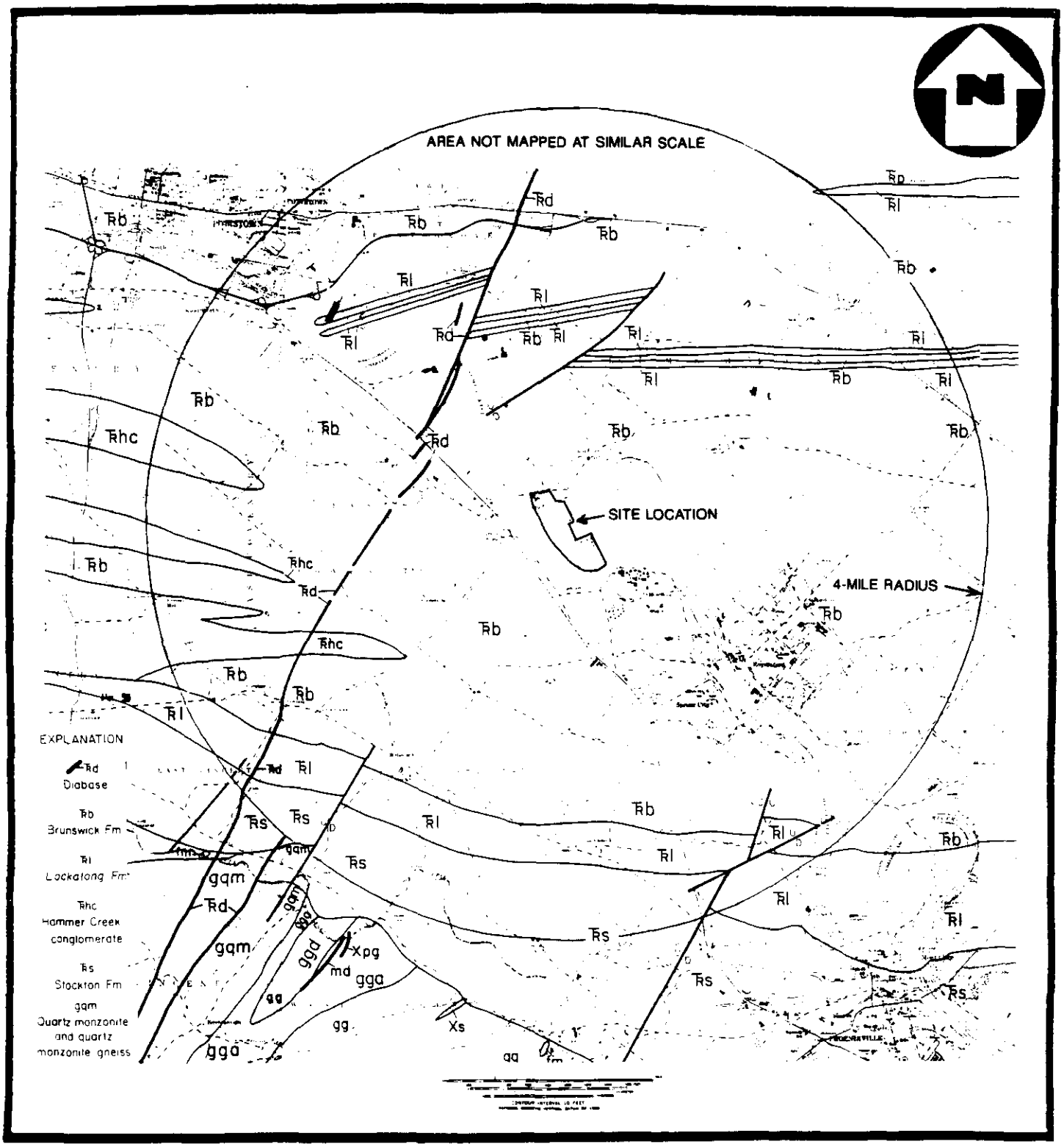
3.3.1 Geology

The site lies within the Triassic Lowlands Section of the Piedmont Physiographic Province. The area is predominantly an undulating plain with relief provided by low hills and ridges. These hills and ridges were formed by the differential weathering and erosion of the sandstones and shales that underlie most of the area. Steeper slopes may be formed along the sides of the Schuylkill River valley, which has been cut below the level of the surrounding countryside. The drainage pattern of the area is dendritic, and the entire study area is drained by the Schuylkill River and its tributaries.[1,52,53]

Virtually all of the study area is underlain by rocks of the Late Triassic age Newark Group, which includes the Lockatong, Hammer Creek, Brunswick, and Stockton Formations. These sedimentary rocks have been intruded by diabase dikes and sills, also of Triassic age. These rocks are part of a large Triassic basin that trends generally northeastward from Virginia to New York. The average dip of the beds within this basin is to the north or northwest at about 20 degrees. Within the vicinity of the site, the bedding dips mainly to the north at about 15 degrees. A very small portion of the southwesternmost part of the study area is underlain by quartz monzonite and quartz monzonite gneiss of the Piedmont Uplands Section of the Piedmont Physiographic Province.[36,54,55,56]

The rocks of the area are cut by many faults, most of which are relatively small. The nearest of these with respect to the site is located one or more miles to the north. This fault strikes to the northeast and is downthrown to the southeast, noticeably offsetting the dipping units of the Brunswick and Lockatong Formation shown on the geologic map (see figure 3.1, page 3-5). Joint systems are well developed in many of the beds of the Brunswick Formation. A very small set of joints strikes about north 30 degrees east. One or both of two less well-developed joint sets may be present at most locations. These sets strike about north 45 degrees west and north 75 degrees east. All joints are nearly vertical, with an average spacing of about six inches. Their orientation appears to be independent of the strike and dip of the beds.[36,52,54]

The formation directly underlying the site and most of the study area is the Triassic age Brunswick Formation. It consists mainly of reddish-brown shale, mudstone, and siltstone. A few very thin beds of green or brown shale are present in some places. Tough, thick-bedded, red argillite is interbedded with a dark gray argillite, typical of the Lockatong Formation, near the base of the Brunswick. Many of the shale beds are micaceous, causing them to split evenly along bedding planes. Calcite and quartz and occasionally barite and pyrite are present, partly filling joints within the Brunswick. The beds of the Brunswick Formation strike from west to east and have dips of approximately 14 to 15 degrees to the north in the vicinity of the site The exact strike and dip of the beds underlying the site are not known. The Brunswick Formation attains a maximum thickness of 9,000 to 16,000 feet; however, the exact thickness beneath the site is unknown.[36,52,54,57]



SOURCE: Pennsylvania Geologic Survey. Atlas of Preliminary Geologic Quadrangle Maps of Pennsylvania. Map 61. 1981.

GEOLOGIC MAP
LINFIELD INDUSTRIAL PARK
MONTGOMERY CO., PA.

FIGURE 3.1

HALLIBURTON NUS
Environmental Corporation

Stratigraphically underlying and occurring within the Brunswick Formation is the Triassic Lockatong Formation. The nearest estimated subcrop or outcrop locations of the Lockatong Formation occur 1.5 miles or more north and 2.9 miles or more south of the site. The formation consists mainly of medium to dark gray argillite interbedded with thin beds of gray to black shale, siltstone, and marlstone. This formation is usually thick bedded or massive. It is made up largely of analcime, dolomite, feldspar, and clay with scattered pyrite. Calcite is common, especially filling joints, and quartz is a very minor constituent. The Lockatong has a maximum thickness of about 1,500 feet in this area near the Schuylkill River.[36,52,54]

Interfingering with the Brunswick Formation is the Hammer Creek Conglomerate. The nearest estimated subcrop or outcrop locations of this unit occur 1.8 or more miles southwest and west of the site. The Hammer Creek is equivalent in age to the Brunswick, and the division of the rocks into these two units is based mainly upon lateral changes in lithologic character. Rocks of the Hammer Creek Conglomerate are much more coarse than those of the Brunswick Formation. They consist of very coarse quartz conglomerate with abundant pebbles and cobbles of gray quartzite along with minor interbeds of coarse red sandstone. Based on outcrop patterns and an average dip of 20 degrees, the Hammer Creek Conglomerate is probably 500 feet thick or less within the study area.[36,58,59]

Stratigraphically underlying the Lockatong Formation about 3.2 miles south of the site is the Triassic Stockton Formation. The estimated subcrop or outcrop location occurs 3.2 miles south of the site. It is the oldest of the Triassic rocks found within the study area and is divided into three members. The lower arkose member is characterized by an abundance of coarse-grained arkosic sandstone and arkosic conglomerate. The middle arkose member is characterized by an abundance of fine- and medium-grained arkosic sandstone. The upper shale member consists manly of shale and siltstone. The sandstones of the Stockton are yellow and brown to red, and the shales are red and soft. Sediments of the different textures are irregularly bedded, and beds commonly pinch out or grade laterally into beds of different texture and color. The Stockton Formation is about 2,300 feet thick in the Phoenixville area.[36,55]

Intruding the Brunswick, Lockatong, Hammer Creek, and Stockton Formations is a series of Triassic diabase sills and dikes. The nearest of these is located about 1.2 miles west-northwest of the site. The diabase intruded as dikes is black, dense, and very fine grained. It consists mainly of labradorite and augite. The dikes are typically five to 100 feet thick. The shales of the Brunswick Formation have been altered to a dark, tough hornfels close to the diabase intrusives. These alteration zones vary greatly in width but are usually between 40 and 100 feet in the vicinity of the smaller dikes.[36,52,54]

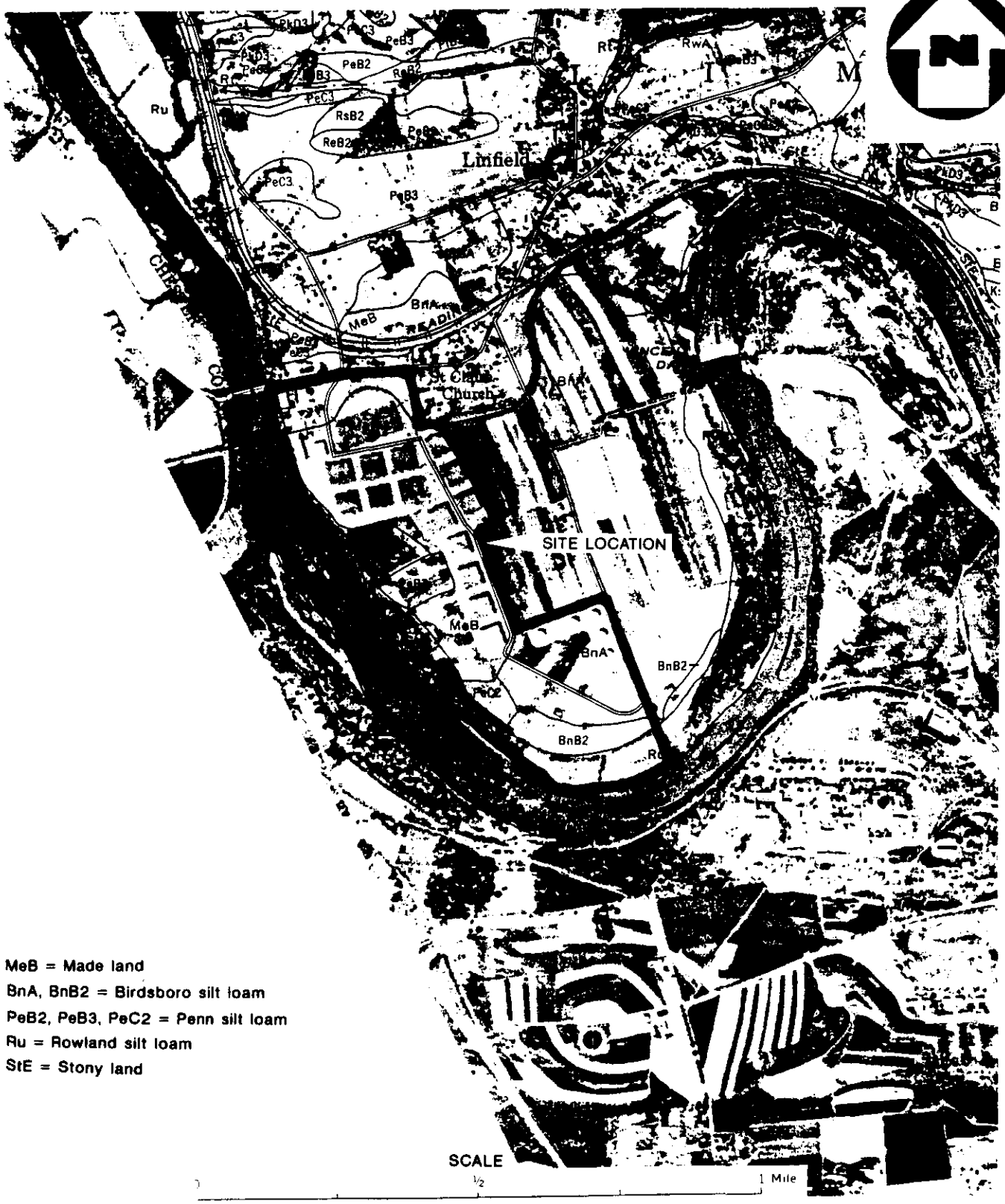
Underlying the Stockton Formation approximately 3.9 miles southwest of the site are quartz monzonite and quartz monzonite gneiss of probable Precambrian age. The unit is a medium- to fine-grained, medium to dark gray rock composed primarily of feldspar and quartz, with dark accessory and alteration minerals including pyroxene, amphibole, and biotite. Locally, the rocks show a foliated or gneissic texture. The thickness of this unit is not estimated.[57,60]

3.3.2 Soils

The soils underlying the site are classified as Made land, Birdsboro, Penn, and Rowland silt loams, and Stony land. The distribution of these units is shown on figure 3.2 (page 3-8). The native soils have been disturbed and/or covered throughout large portions of the site by the construction of buildings, tanks, railroad spurs, roads, and other site facilities.[2,61]

Made land (MeB on figure 3.2) covers approximately 50 percent of the site in the northern and central-eastern portions. This unit is more specifically described as Made land, shale and sandstone materials, sloping. It results from the altering and mixing of soils that formed in material weathered from shale and sandstone. It is mainly nearly level and gently sloping but also includes some moderately sloping and steep areas. It is used for residential, industrial, commercial, and institutional development. Dusky-red to yellowish-brown shaly silt loam to channery sandy loam comprise much of the unit, and many areas consist entirely of pieces of shale. Bedrock may crop out in some places and may be as much as six feet deep in other places. The estimated permeability ranges from moderate to very slow (2.0 to less than 0.2 inch per hour). The soil reaction is medium acid to very strongly acid (pH, 6.0 to 4.5).[61]

Birdsboro silt loam soils cover approximately 20 percent of the site in the southeastern portion. They are present as the Birdsboro silt loam, zero to three percent slopes (BuA on figure 3.2) and as Birdsboro silt loam, three to eight percent slopes, moderately eroded (BnB2 on figure 3.2). They are deep, well-drained, reddish-brown soils that formed from stream sediments washed from uplands underlain by red shale and sandstone. In a typical Birdsboro soil profile, the surface layer is friable, dark, reddish-brown silt loam with a few river pebbles. The surface layer is about eight inches thick. The subsoil is friable, reddish-brown silty clay loam or clay loam 2-1/2 to three feet thick The substratum is red or reddish-brown sandy loam about two feet thick and contains considerable gravel. The substratum is underlain by a layer of firm, dusky-red silt loam weathered from underlying rock. Soft, weathered dusky red shale bedrock is typically found at a depth of seven feet; however, the depth to bedrock ranges from four to 15 feet. Birdsboro soils have moderate permeability (0.63 to two inches per hour) and high available moisture capacity. The soil reaction is strongly acid to medium acid (pH, 5.1 to 6.0).[61]



MeB = Made land
BnA, BnB2 = Birdsboro silt loam
PeB2, PeB3, PeC2 = Penn silt loam
Ru = Rowland silt loam
StE = Stony land

SOURCE: US Dept. of Agriculture, Soil Conservation Service. Soil Survey of Montgomery Co., PA. 1967.

SOILS MAP
LINFIELD INDUSTRIAL PARK
MONTGOMERY CO., PA.

FIGURE 3.2

HALLIBURTON NUS
Environmental Corporation

Rowland silt loam, coal overwash (Ru on figure 3.2), covers approximately 10 percent of the site along the western and southern boundaries adjacent to the Schuylkill River. Rowland soils are deep, moderately well-drained to somewhat poorly drained, nearly level silt loams on floodplains. They formed from material washed from uplands underlain by red shale and sandstone. The Rowland silt loam, coal overwash unit has a surface layer of black silt loam that is one to three feet thick. This is underlain by a substratum consisting of several layers of dark reddish-gray silt loam. Shale or sandstone bedrock occurs at a depth of three to 12 feet. This soil has moderate permeability (0.63 to two inches per hour) and high available moisture capacity. The soil reaction is very strongly acid to medium acid (pH, 4.5 to 6.0).[61]

Penn silt loam soils cover approximately 10 percent of the site in the south-central and west-central portions. They are present as the Penn silt loam, three to eight percent slopes, moderately eroded (PeB2 on figure 3.2); the Penn silt loam, three to eight percent slopes, severely eroded (PeB3 on figure 3.2); and the Penn silt loam, eight to 15 percent slopes, moderately eroded (PeC2 on figure 3.2). They are moderately deep to shallow, reddish-brown silt loams that formed in material weathered from red shale, siltstone, and fine-grained sandstone. In a representative profile, the surface layer is friable, reddish-brown silt loam about eight inches thick. The subsoil is reddish-brown shaly silt loam about 12 inches thick, and the substratum is a weak red layer of broken shale pieces with a small amount of silt or loam about 10 to 12 inches thick. Shale, siltstone, or fine-grained sandstone bedrock occurs at a depth of two to three feet. Penn soils have moderately rapid permeability (two to 6.3 inches per hour) and low to moderate available moisture capacity. The soil reaction is strongly acid to neutral (pH, 4.5 to 7.0).[61]

Stony land, steep (StE on figure 3.2) covers approximately 10 percent of the site in a narrow band along the steep slopes of the western portion. This land type occurs in areas of Manor, Penn, Edgemont, and Neshaminy soils; however, individual soil types are not mapped within this unit. These areas are stony and often contain rock ledges and have slopes ranging from 25 to 80 percent. The soil horizons are typically shallow, and the depth to bedrock ranges from several inches to 10 feet. Surface runoff is rapid, and internal drainage is medium to rapid. Permeability and soil reaction values are variable and are not assigned for this unit.[61]

3.3.3 Groundwater

Groundwater in the area occurs under water-table and artesian conditions. Recharge of groundwater is due to the fraction of the local precipitation that infiltrates the soil and underlying material, eventually reaching the saturated zone. From this point, groundwater generally moves downward and laterally until it eventually returns to the surface through discharge points such as springs, seeps, wells, and streambeds.[52,54]

ORIGINAL
(Red)

The rocks of the (b) (9) Formation form the aquifer immediately underlying the site. Groundwater in the (b) (9) Formation is mainly stored in and moves through secondary forms of porosity. Due to the fine-grained nature of most of the rocks of the (b) (9) the permeability due to primary porosity is small. Fractures parallel to bedding are usually narrow and probably contribute little to the formation's permeability. The most significant openings with respect to groundwater flow are the nearby vertical joint planes, which cross each other at various angles throughout the beds of the (b) (9) Formation. These provide an interconnected series of channels through which groundwater can flow.[52,54]

The (b) (9) is generally a reliable source of small to moderate supplies of water. Sufficient supplies of water for domestic use can be obtained at almost any location from wells drilled (b) (9) below the water table. In order to obtain maximum yields, wells should be drilled to depths ranging (b) (9) or more. Wells in the (b) (9) Formation of Montgomery County yield from five gpm or less to more than 300 gpm.[52,54]

Forty-two wells in the (b) (9) within Limerick Township range in depth (b) (9) feet, with a median depth (b) (9) These wells have yields ranging from four to 60 gpm, with a median value of 15 gpm. The static water levels in these wells range from (b) (9) the surface, with a median depth of (b) (9) he surface. The median depth to consolidated bedrock is (b) (9) [7]

The (b) (9) is the poorest water-bearing horizon of the (b) (9) of the area; however, domestic supplies are usually available at depths of not more than 250 feet. The rocks have low porosity and low permeability, although joint openings provide secondary porosity and permeability. The least permeable beds are shale and argillite, which have little or no intergranular permeability. Well yields from the (b) (9) n Chester County range from five to 32 gpm, with a median value of 12 gpm.[53,57,59]

The (b) (9) will generally provide sufficient amounts of groundwater for domestic use and will frequently yield adequate supplies for small municipal and industrial uses. Most of the groundwater occurs in and moves through secondary openings along bedding planes, joints, and faults. Domestic wells in the (b) (9) have specific capacities ranging from less than 0.04 to over four gpm per foot of drawdown, with a median value of 0.53 gpm per foot of drawdown. Non-domestic wells have a median-specific capacity of 0.9 gpm per foot of drawdown and a median yield of 120 gpm.[62]

The (b) (9) Formation is capable of yielding moderate to large supplies of water to wells. The more coarse sandstone and conglomerate beds are the best aquifers of the formation. The (b) (9) Formation has high to moderate total effective porosity and permeability resulting from primary intergranular openings in the weathered portion and from secondary joint and bedding-plane openings in the unweathered portion. Well yields in the Stockton Formation of Chester County range from four to 800 gpm, with a median value of 25 gpm.[53,57,59]

The (b) (9) is considered to be a poor formation as a source of water. Most of the groundwater circulation is dependent upon joint openings, which provide very low secondary porosity and low permeability. The (b) (9) is relatively impervious and is expected to act as a barrier to groundwater flow with respect to the adjacent Triassic sedimentary rocks. The (b) (9) will usually yield small amounts of water from relatively shallow depths sufficient for domestic supplies. Well yields in (b) (9) n Chester County range from 0.5 to 40 gpm, with a median value of nine gpm.[53,57,59]

The (b) (9) generally comprises poor water-bearing rocks; however, it yields small supplies sufficient for domestic use. These rocks have low primary porosity, although joints provide secondary porosity and permeability of low magnitude. The best water-bearing zones are in the most weathered and fractured portions above the fresh, consolidated bedrock. Wells in th (b) (9) of Chester County have yields ranging from one to 180 gpm, with a median value of 24 gpm.[53,57,59]

Available records indicate that six industrial supply wells were completed at the site in 1934 and 1935. These wells range in depth (b) (9) All are completed in the (b) (9) Formation and have yields ranging from 10 to 225 gpm, with an average yield of 117.5 gpm. The static water levels and depth of casing in the wells are not reported. These wells were not observed during the site inspection, and their current status is unknown.[4,53]

The actual depth to groundwater and direction of shallow groundwater flow at the site are unknown. Based on topographic control and on the role of rivers and streams as groundwater discharge points, the direction of groundwater flow throughout most of the site is expected to be to the west, southwest, or south toward the Schuylkill River. Based on the site's topographic elevations with respect to the Schuylkill River, the depth to groundwater is expected to be within a few feet of the surface adjacent to the river and to be less than or equal to about 70 feet below the ground surface at the highest elevation of the site. Median water depths in area wells suggest that the depth to groundwater is probably on the order of 40 feet below the ground surface.[1,47,52,54]

ORIGINAL
(Red)

3.4 CLIMATE AND METEOROLOGY

According to the climatological data obtained for the city of Phoenixville, Pennsylvania, located approximately six miles southeast of the site, and based on the period from 1951 to 1980, the following is offered. The average annual temperature is 53.1°F; the coldest month is January with a mean temperature of 30.1°F, and the warmest month is July with a mean temperature of 74.9°F. The average annual precipitation is 43.55 inches. The month of highest average precipitation is July, with 4.13 inches; the month with the lowest average precipitation is February, with 2.94 inches. A one-year, 24-hour rainfall will produce 2.5 inches of rain. A two-year, 24-hour rainfall will produce 3.5 inches of rain. The mean annual lake evaporation for the area is 32 inches. The net moisture gain is 11-1/2 inches.[63,64,65,66]

3.5 LAND USE

The site is located in a rural, mostly residential area. State Game Lands No. 234 is to the east. The Schuylkill River borders the property on the southern and western banks. The residential town of Linfield is located adjacent to and north-northeast of the site. ConRail Corporation has abandoned tracks on site.[1,2]

3.6 POPULATION DISTRIBUTION

The Linfield Industrial Park Site is located in the rural outskirts south-southwest of Linfield, Pennsylvania. The population is as follows:[1,34,37]

Distance	Population
0 to 1/4 mile	126
1/4 to 1/2 mile	338
1/2 to 1 mile	1,251
1 to 2 miles	9,348
2 to 3 miles	6,715
3 to 4 miles	15,702
Total	34,010

Population figures are based on a count of houses in the study area multiplied by 2.79 persons per house and water supply population figures furnished by CUHWC and PMWA.[1,34,37]

3.7 CRITICAL ENVIRONMENTS

Two federally listed endangered birds are expected to be found as transient species in the study area. They are the bald eagle (Haliaeetus leucocephalus) and the peregrine falcon (Falco peregrinus). There is no listed critical habitat for these species in the study area.[67]

SECTION 4.0

4.0 WASTE TYPES AND QUANTITIES

Linfield Industrial Park was operated as a whiskey distillery and a bonded warehouse for the storage and distribution of whiskey products. For an unknown period of time, ethylene glycol (antifreeze) and ammonia-based cleaners were bottled and distributed from the site.[2,13,19] The site has remained inactive since it was sold to 888 Warehousing in 1986. The condition of the site has remained the same since its closure.[2]

There are no records detailing the waste types and quantities generated at the Linfield Industrial Park; however, during the FIT preliminary assessment, numerous items of concern were observed:[2]

Parking Lot Area

An abandoned tanker truck was observed northwest of the on-site parking lot. The truck had an approximately 8,000-gallon capacity. The truck's contents were not known.[2]

Distillery Area

The distillery building contains approximately eight wooden vats (10 by 20 feet in size) that have an approximately 11,700-gallon capacity. An underground fuel tank with a pump in the distillery area had an approximate capacity of 1,000 gallons. The contents of the fuel tanks are not known. North and west of the distillery building are five above-ground storage tanks. These tanks are metal; the contents are not known. Three of the cylinders are six by 25 feet in size with a 5,284-gallon capacity; two of the cylinders are five by 10 feet in size with a capacity of 939 gallons each. North of these tanks are two underground storage tanks with an approximate capacity of 10,000 gallons each; an unknown quantity of an oil-like substance was inside the tanks. Adjacent to and east of the tanks are an electrical transformer unit and an area of stained soils. The unit measures four by five by four feet in size and contains liquid. Ten 55-gallon drums containing waste oils and unknown materials were observed in this area. Southwest of the distillery building in a shed are ten 55-gallon drums marked "Oil and Varnish." The contents of the drums are not known. South of the distillery building is a metal cylinder above-ground storage tank, 30 by 50 feet in size, with an approximately 264,231-gallon capacity; the contents of the tank are not known.[2]

ORIGINAL
(Red)

Building No. 2 Area

Located east of building no. 2 are 10 above-ground black metal cylinder storage tanks, six by 40 feet in size, with 8,455-gallon capacities. There are also one white metal cylinder above-ground storage tank, five by 30 feet in size with a 4,400-gallon capacity, and one aluminum-brushed metal cylinder above-ground storage tank, five by 10 feet in size with a 1,467-gallon capacity. Four abandoned tanker trucks were observed around building no. 2. One truck was still hooked to the building via a discharge pipe. The trucks have a capacity of 8,000 gallons each; the contents of the trucks were not known.[2]

Warehouse Area

Two aluminum cylinder above-ground storage tanks, 40 by 50 feet in size with a 469,244-gallon capacity, and one aluminum cylinder above-ground storage tank, eight by 15 feet in size with a 5,637-gallon capacity, were located centrally among the warehouse buildings.[2]

Concrete Pad Area

At least twenty-two 55-gallon drums were observed in this area: ten 55-gallon drums were empty and rusted, and twelve 55-gallon drums contained unknown liquids. Four drums are located on or near the northwestern pad area, and eight drums are located on or near the southeastern concrete pad area. One 55-gallon drum near the southeastern concrete pad area contained an oil-like residue that had spilled. A stained soil area measuring approximately three by six feet in size was observed in this area. Five 5-gallon metal drums marked "Herbicide" were observed in a shed-like building. A 20-gallon transformer is located south of the pads with stained soils.[2]

Former Tank Farm Area

This area once housed five metal cylinder above-ground storage tanks. The tanks were individually fenced and bermed. At an unknown date, the tanks were dismantled and removed. Currently, only the fenced concrete containment areas exist.[1,2,4]

Miscellaneous Waste Areas

An unlined limestone pit, adjacent to warehouse no. 10, allegedly was used to dispose of deionized wastewater via groundwater after neutralization. The site, condition, and location of this pit are not known. Also, a catch basin was reportedly utilized for settling suspended solids to reduce the amount of wastewater sent to the wastewater treatment plant. According to PA DER file information, wastewater generated at the site was disposed in the Schuylkill River via the NPDES outfall. Ethylene glycol that spilled into the parking lot drainage system resulted in a contractual removal assistance by Eldridge Waste Management, of Chester, Pennsylvania. The quantity of waste removed is unknown. The soil area at the bottle-making room was contaminated with unknown substances and disposed at the Boyertown Landfill. The quantity of contaminated soils is unknown.[7,8,10,15,17,19,21,22,29]

During an emergency assessment of the site performed by EPA Emergency Response on March 14 and 27, 1991, numerous drums and containers were found within the on-site buildings. These included containers of sulfuric acid, drums and containers marked "Flammable," containers of liquid caustic materials, thousands of small containers filled with antifreeze, drums of methanol, and a drum marked "Toluene."[24,25]

On-site surface soil samples collected by HALLIBURTON NUS ARCS III on January 30, 1992 contained elevated levels of a number of organic and inorganic contaminants, including fluoranthene (72,000 ppb), benzo(a)pyrene (30,000 ppb), PCBs (300,000 ppb), and lead (4,810 ppm).[4]

During the site inspection, a trash dump measuring approximately 30 by 75 feet and consisting mostly of empty plastic antifreeze containers was observed between the southernmost warehouse and the Schuylkill River. Adjacent to this area were approximately 60 upright empty and rusted drums. No markings were visible on the drums.[4]

SECTION 5.0

ORIGINAL (Red)

5.0 FIELD TRIP REPORT

5.1 SUMMARY

On Tuesday, January 28, 1992, HALLIBURTON NUS ARCS III personnel (b) (6) (b) (6) conducted a site inspection of the Linfield Industrial Park Site in Linfield, Montgomery County, Pennsylvania. Weather conditions were clear with light winds, and temperatures were in the 30s.

Eleven aqueous and 14 solid samples were obtained (see figures 5.1 and 5.2, pages 5-4 and 5-5). Photographs were taken on site (see figure 5.3, page 5-7, and the photograph log, section 5.5).

5.2 PERSONS CONTACTED

5.2.1 Prior to Field Trip

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5.2.2 At the Site

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5.2.3 Water Supply Well Information

The following off-site wells were sampled during the site inspection. (b) (6) Completed well questionnaires are located in appendix C.

(b) (6)
(b) (6)
Linfield, Pennsylvania 19468
(b) (6)
Drinking
(b) (6)

(b) (6)
(b) (6)
Linfield, Pennsylvania 19468
(b) (6)
Drinking
(b) (6)

TDD NUMBER 3263-09

EPA NUMBER PA-2898

5.3 SAMPLE LOG

SITE NAME Linfield Industrial Park

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
CHY 02	MCJE 02		(b) (9)	AQ	Clear, no odor	(b) (9)	Drinking water for the people of Spring City and Royersford		No HNU readings above bkgd.
CHY 03	MCJE 03		(b) (9)	AQ	clear, no odor	(b) (9) Linfield, PA	Drinking		
CHY 04	MCJE 04		(b) (9)	AQ	clear, no odor	(b) (9) Linfield, PA	Drinking		
CHY 05	MCJE 05		SW-1	AQ	clear, fish-like odor	Upstream sample from Schuylkill R., under Main St. bridge	Recreation; three water companies operate intakes within 15 miles downstream	6.92	No HNU readings above background
CHY 06	MCJE 06		SW-2	AQ	clear, no odor	Mid-stream sample from Schuylkill R., at former NPDES discharge	Recreation; three water companies operate water intakes within 15 miles downstream	6.72	
CHY 07	MCJE 07		SW-3	AQ	Clear, no odor	On-site drainage swale ~ 30' from confluence with Schuylkill R.	No uses	6.70	
CHY 08	MCJE 08		SW-4	AQ	Slightly turbid, no odor	Downstream sample from Schuylkill R.	Recreation; three water companies operate intakes within 15 miles downstream	6.47	
CHY 10	MCJE 10		SW-6	AQ	Duplicate of SW-4	Same as SW-4	same as SW-4		
CHY 09	MCJE 09		(b) (9)	AQ	Clear, no odor	(b) (9)	Drinking water for Spring City and Royersford		

ORIGINAL (Red)

TDD NUMBER 3263-09

EPA NUMBER PA-2898

5.3 SAMPLE LOG

SITE NAME Linfield Industrial Park

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
CHY 19	MCJE 19		S-5	SOL	red sandy clay on site	At corrugated metal pipe outfall south and west of warehouses	Access unrestricted		No HNU readings above background
CHY 22	MCJE 22		S-8	SOL	Duplicate of S-5 on site	same as S-5	Access unrestricted		
CHY 20	MCJE 20		S-6	SOL	Dark brown soil with extensive organic material, flakes of whitl material on site	Southeastern edge of trash dump west of warehouses	Access unrestricted		
CHY 21	MCJE 21		S-7	SOL	Dark gray soil with orange specks on site	~ 10' south of drums near trash dump west of warehouses	Access unrestricted		
CHY 23	MCJE 23		S-9	SOL	brown sandy loam on site	In area of stressed vegetation ~ 100' north of abandoned building at southern end of site	Access unrestricted		
CHY 26	MCJE 26		S-10	SOL	brown, clayey soil off site	Across Main St. from site	Access unrestricted		
CHY 25	—		S-0	AQ	Aqueous trip blank associated with solid samples	—	—		—

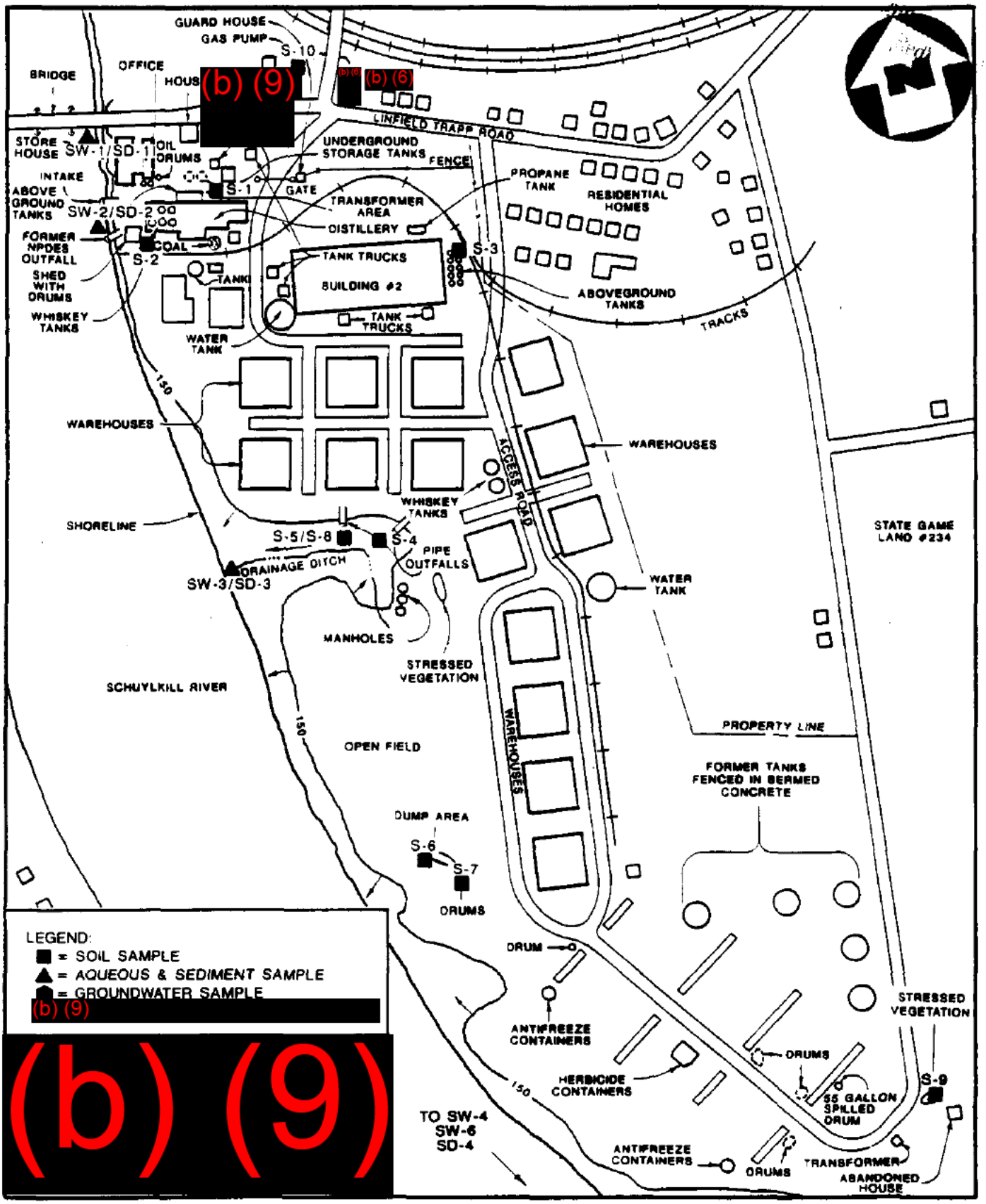
TDD NUMBER 3263-09

EPA NUMBER PA-2898

5.3 SAMPLE LOG

SITE NAME Kinfield Industrial Park

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
CHY24	MCJE24		AQ-0	AQ	Aqueous blank	—	—		—
CHY11	MCJE11		Sd-1	SOL	light brown silt, red shale pebbles, some organic matter	same as SW-1	Access unrestricted		No HNU readings above background
CHY12	MCJE12		Sd-2	SOL	light brown silt, some organic matter	same as SW-2	Access unrestricted		
CHY13	MCJE13		Sd-3	SOL	clayey silt, reddish	same as SW-3	Access unrestricted		
CHY14	MCJE14		Sd-4	SOL	Brown sandy loam	same as SW-4	Access unrestricted		
CHY15	MCJE15		S-1	SOL	dark brown sandy loam on site	At base of transformer on northern side of distillery	Access unrestricted		
CHY16	MCJE16		S-2	SOL	black viscous silty clay with grease odor on site	At drums outside of shed west of distillery	Access unrestricted		
CHY17	MCJE17		S-3	SOL	Brown loam with some roots and reddish clay on site	Inside above ground tank farm on eastern side of building #2	Access unrestricted		
CHY18	MCJE18		S-4	SOL	Brown sandy loam On site	At confluence of two concrete drainage troughs South and west of warehouses	Access unrestricted		



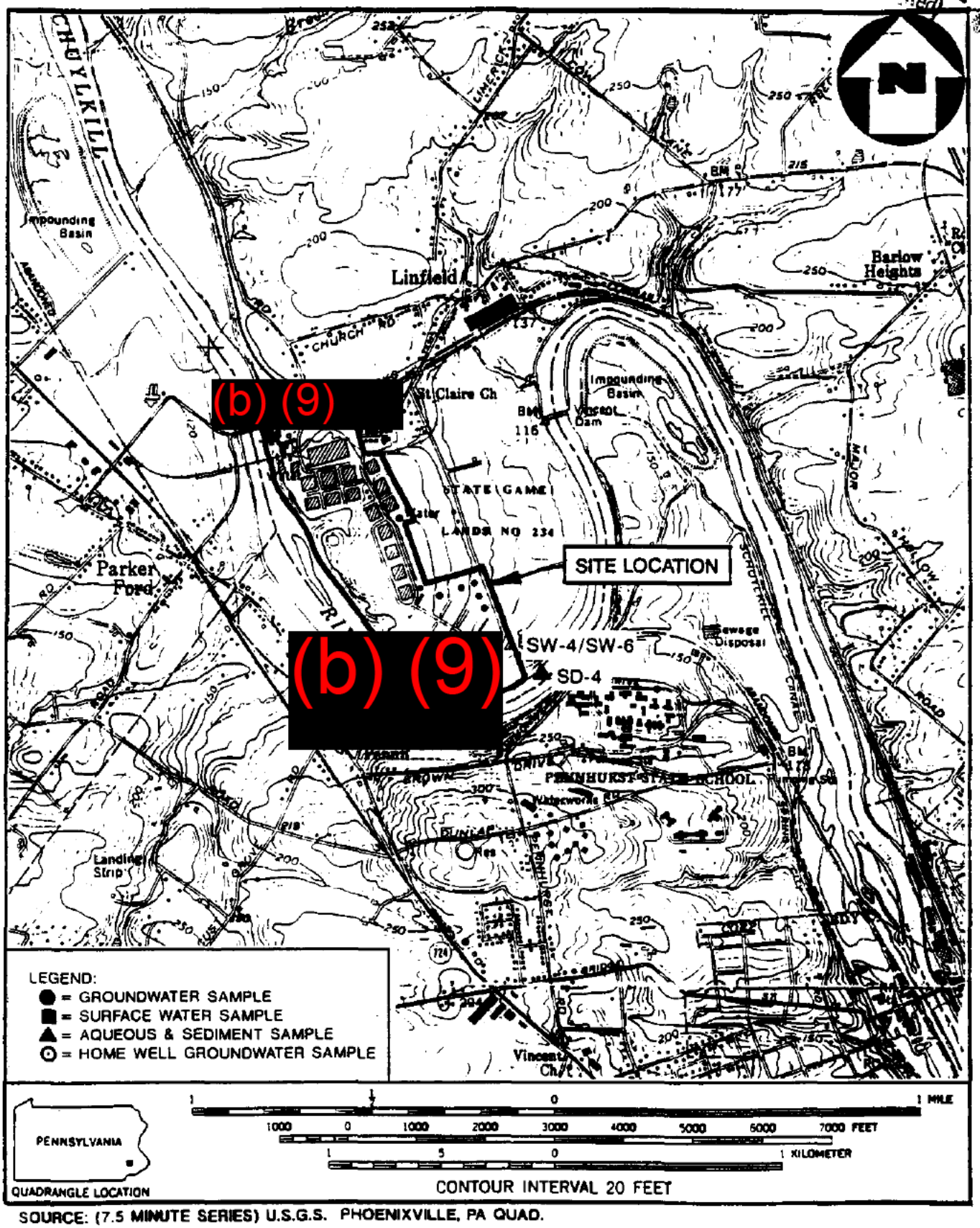
SAMPLE LOCATION MAP

FIGURE 5.1

LINFIELD INDUSTRIAL PARK, LINFIELD, PA.

(NO SCALE)

NUS CORPORATION



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. PHOENIXVILLE, PA QUAD.

OFF-SITE SAMPLE LOCATION MAP

LINFIELD INDUSTRIAL PARK, LINFIELD, PA.

SCALE 1: 24000

FIGURE 5.2

NUS CORPORATION

ORIGINAL (Red)

5.4 SITE OBSERVATIONS

- The background HNU reading was 0.4 ppm. No readings above background were recorded.
- The radiation mini-alert was set on the X1 position. No readings above background were recorded.
- The entrance gate to the site was fitted with a lock and chain.
- There was a fence on the northeastern corner of the site. Otherwise, pedestrian access to the site was unrestricted.
- The on-site production well was not accessible for sampling. An inoperative pump was inside the well.
- A trash dump, consisting mostly of empty plastic antifreeze containers, was west of the southernmost warehouse. The dump measured approximately 30 by 75 feet. Adjacent to the dump were approximately 60 drums that were upright, empty, and rusted. No markings were visible on the drums.
- Two areas of stressed vegetation were observed on site: an approximately 20- by 100-foot area in the middle of the site, between the warehouse and the Schuylkill River, and an approximately 100- by 100-foot area at the southern end of the site. The vegetation in these two areas was identical.
- Bicycle tracks were observed in the snow between the third and fourth warehouse from the southernmost warehouse.
- Shotgun shells were observed throughout the site.

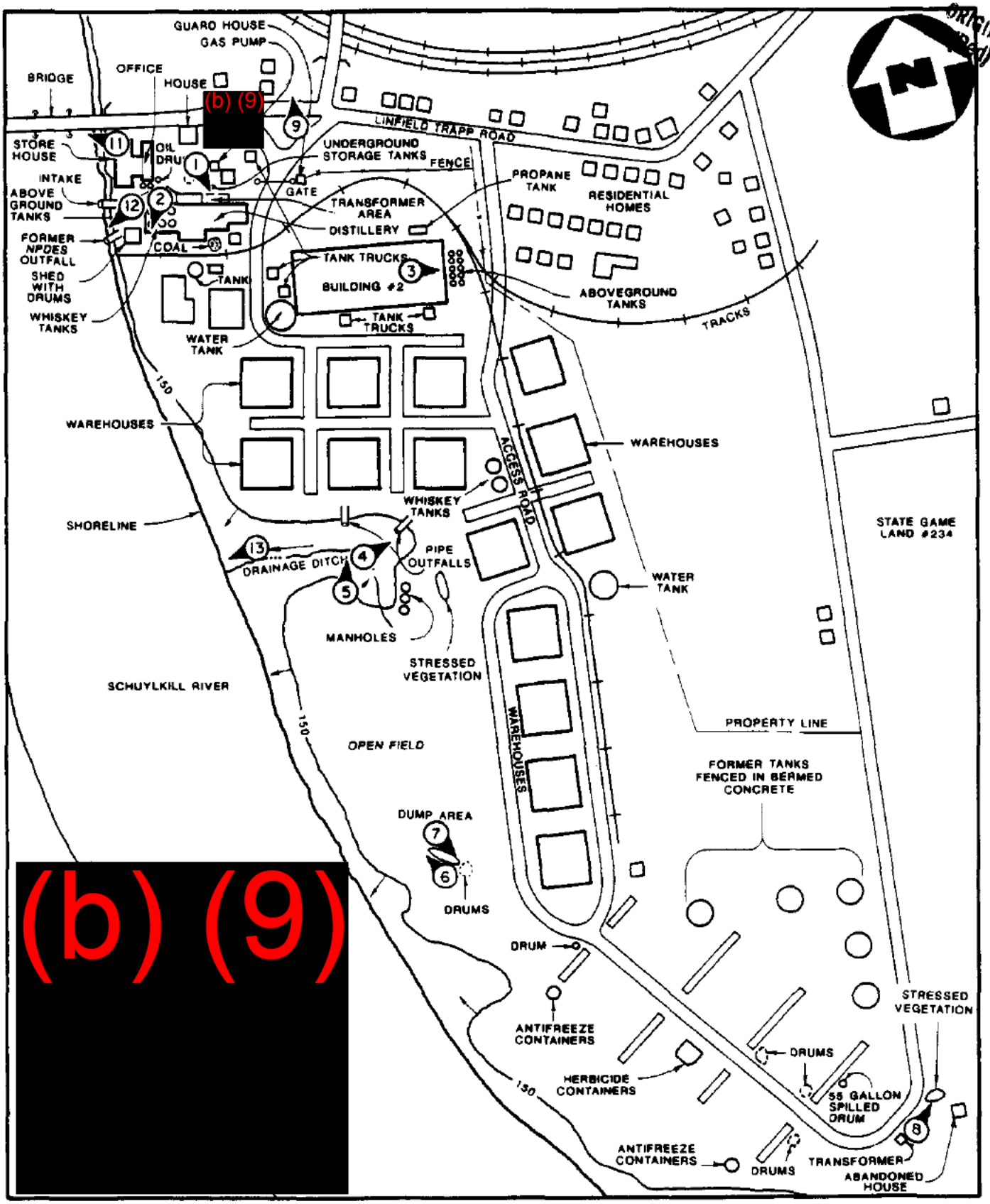


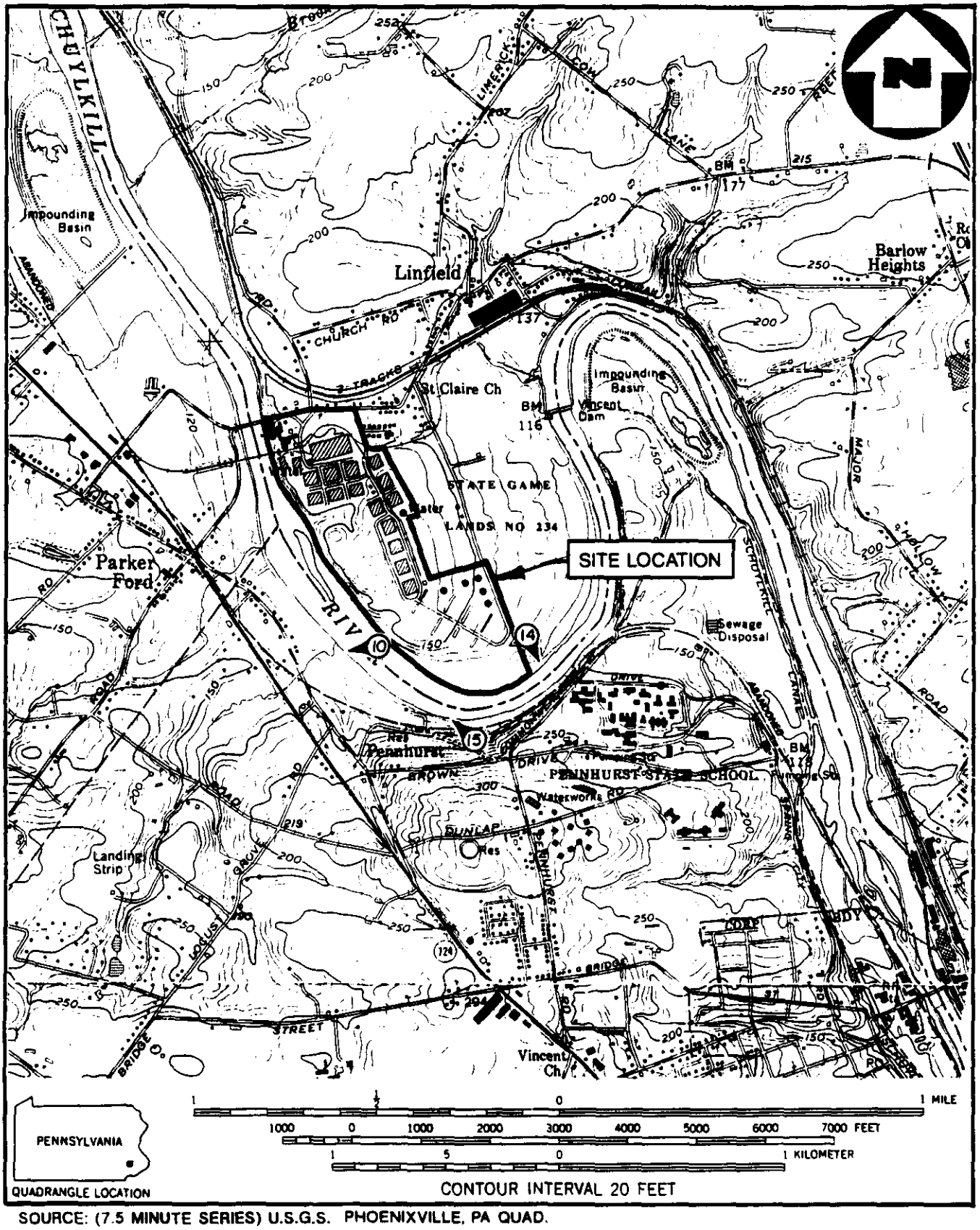
PHOTO LOCATION MAP

LINFIELD INDUSTRIAL PARK, LINFIELD, PA.

(NO SCALE)

FIGURE 5.3

NUS CORPORATION



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. PHOENIXVILLE, PA QUAD.

OFF-SITE PHOTO LOCATION MAP

LINFIELD INDUSTRIAL PARK, LINFIELD, PA.

SCALE 1: 24000

FIGURE 5.4

NUS CORPORATION

EPA REGION III
SUPERFUND DOCUMENT MANAGEMENT SYSTEM

DOC ID # 404788
PAGE # _____

IMAGERY COVER SHEET
UNSCANNABLE ITEM

Contact the CERCLA Records Center to view this document.

SITE NAME Linfield Ind Park

OPERABLE UNIT 00

SECTION/BOX/FOLDER IC Box 1 1.002

REPORT OR DOCUMENT TITLE Final Screening Site Inspection

DATE OF DOCUMENT Sept. 1, 1992

DESCRIPTION OF IMAGERY photos

NUMBER AND TYPE OF IMAGERY ITEM(S) 15 photos

3263-09

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Linfield Industrial Park	Linfield - Trappe Road

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST
Linfield	PA	19468	Montgomery	091	PA10

09 COORDINATES LATITUDE	LONGITUDE
40° 12' 08" · N	75° 34' 38" · W

10 TYPE OF OWNERSHIP (Check one)
[X] A. PRIVATE [ ] B. FEDERAL _____ [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL
[ ] F. OTHER _____ [ ] G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
1 / 28 / 92 (month day year)	[ ] A. ACTIVE [X] B. INACTIVE	unknown (BEGINNING YEAR) / 1986 (ENDING YEAR) [ ] UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
[ ] A. EPA [X] B. EPA CONTRACTOR HALLIBURTON NUS (Name of firm) [ ] C. MUNICIPAL [ ] D. MUNICIPAL CONTRACTOR _____ (Name of firm)
[ ] E. STATE [ ] F. STATE CONTRACTOR _____ (Name of firm) [ ] G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
(b) (4)	Geologist	HALLIBURTON NUS	(215) 971-0900
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
(b) (4)	Environmental Scientist	HALLIBURTON NUS	(215) 971-0900
(b) (4)	Environmental Scientist	HALLIBURTON NUS	(215) 971-0900
(b) (4)	Environmental Scientist	HALLIBURTON NUS	(215) 971-0900
(b) (4)	Environmental Scientist	HALLIBURTON NUS	(215) 971-0900
(b) (4)	Environmental Scientist	HALLIBURTON NUS	(215) 971-0900
13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Bernard Shafran	Attorney	319 Fifth Avenue New York, New York 10016	(212) 679-4666
			( )
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
[X] PERMISSION [ ] WARRANT	8:30 a.m.	Clear and cold

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Michael Giuranna	United States Environmental Protection Agency	(215) 597-3165

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
(b) (4)	HALLIBURTON NUS	ARCS III	(215) 971-0900	2 / 12 / 92 (month day year)

ORIGINAL

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- [ ] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER _____ *(Specify)*
- [ ] E. SLURRY
- [X] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS: unknown
CUBIC YARDS: _____
NO. OF DRUMS: _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- [X] A. TOXIC
- [X] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [X] E. SOLUBLE
- [ ] F. INFECTIOUS
- [X] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTES	unknown		On-site soil samples taken by HALLIBURTON NUS ARCS III
SOL	SOLVENTS	unknown		on January 30, 1992 revealed elevated levels of
PSD	PESTICIDES			organic and inorganic contaminants. On March 27, 1991,
OCC	OTHER ORGANIC CHEMICALS	unknown		EPA Emergency Response found containers of various
IOC	INORGANIC CHEMICALS	unknown		hazardous materials, including acids, caustics, and
ACD	ACIDS	unknown		flammables, inside the on-site warehouses.
BAS	BASES	unknown		
MES	HEAVY METALS	unknown		

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SOL	toluene	108-88-3	on-site soil	120	ppb
OCC	fluoranthene	206-44-0	on-site soil	72,000	ppb
OCC	pyrene	129-00-0	on-site soil	54,000	ppb
OCC	chrysene	218-01-9	on-site soil	32,000	ppb
OCC	benzo(a)pyrene	50-32-8	on-site soil	30,000	ppb
OCC	phenanthrene	85-01-8	on-site soil	52,000	ppb
OCC	anthracene	120-12-7	on-site soil	14,000	ppb
IOC	Aroclor 1260	11096-82-5	on-site soil	300,000	ppb
MES	lead	7439-92-1	on-site soil	4,810	ppm
MES	mercury	7439-97-6	on-site soil	2.90	ppm
MES	zinc	7440-66-6	on-site soil	1,230	ppm
IOC	cyanide		on-site soil	1.8	ppm

IV. FEEDSTOCKS *(See Appendix for CAS Numbers)* N/A

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

HALLIBURTON NUS, ARCS III. Site inspection; site visit. Project No. 3263-09, January 30, 1992.

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9002-18, June 27, 1991.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 19,500 — 04 NARRATIVE DESCRIPTION

On-site soil samples taken by ARCS III on January 30, 1992 contained elevated levels of organic and inorganic contaminants, including benzo(a)pyrene (30 ppm), PCBs (300 ppm), and lead (4,810 ppm). 19,831 people use groundwater within the study area for drinking.

---

01 [X] B. SURFACE WATER CONTAMINATION — 02 [X] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 38,894 — 04 NARRATIVE DESCRIPTION

Aqueous samples from the Schuylkill River taken by ARCS III on January 30, 1992 contained cyanide (11.70 ppb), zinc (301 J ppb), and lead (59.9 J ppb). 38,894 people obtain drinking water from the Schuylkill River within 15 miles downstream from the site.

---

01 [ ] C. CONTAMINATION OF AIR — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed.

---

01 [ ] D. FIRE/EXPLOSIVE CONDITIONS — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed.

---

01 [X] E. DIRECT CONTACT — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 1,715/1 mile — 04 NARRATIVE DESCRIPTION

On-site soil samples taken by ARCS III on January 30, 1992 contained elevated levels of organic and inorganic contaminants including benzo(a)pyrene (30 ppm), PCBs (300 ppm), and lead (4,810 ppm). Site access is unrestricted. 1,819 people live within one mile of the site.

---

01 [X] F. CONTAMINATION OF SOIL — 02 [X] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED

03 AREA POTENTIALLY AFFECTED: 125 (Acres) — 04 NARRATIVE DESCRIPTION

On-site soil samples taken by ARCS III on January 30, 1992 contained elevated levels of organic and inorganic contaminants, including benzo(a)pyrene (30 ppm), PCBs (300 ppm), and lead (4,810 ppm). The total area of the site is 125 acres.

---

01 [X] G. DRINKING WATER CONTAMINATION — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 58,394 — 04 NARRATIVE DESCRIPTION

On-site soil samples taken by ARCS III on January 30, 1992 contained elevated levels of organic and inorganic contaminants, and an aqueous sample from the Schuylkill River contained cyanide (11.70 ppb), zinc (301 J ppb), and lead (59.9 J ppb). 58,275 people obtain drinking water from either groundwater within the study area or surface water within 15 miles downstream from the site.

---

01 [ ] H. WORKER EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [ ] POTENTIAL — [ ] ALLEGED

03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed.

---

01 [X] I. POPULATION EXPOSURE/INJURY — 02 [ ] OBSERVED (DATE: _____) — [X] POTENTIAL — [ ] ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 58,394 — 04 NARRATIVE DESCRIPTION

The population potentially affected by the site consists of those obtaining drinking water from companies drawing from the Schuylkill River, those utilizing groundwater drawn from the study area, and those persons accessing the contaminated areas of the site.

ORIGINAL (Red)

EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☒ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

Aqueous samples from the Schuylkill River taken by ARCS III on January 30, 1992 contained cyanide (11.7 ppb), zinc (301 J ppb), and lead (59.9 J ppb). The types of species potentially affected are not known.

01 ☒ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

Aqueous samples from the Schuylkill River taken by ARCS III on January 30, 1992 contained cyanide (11.7 ppb), zinc (301 J ppb), and lead (59.9 J ppb).

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES *(Spills, Runoff, Standing liquids, Leaking drums)* 02 ☒ OBSERVED (DATE: 1/30/92) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 1,715 04 NARRATIVE DESCRIPTION

On-site soil samples taken by ARCS III on January 30, 1992 contained elevated levels of organic and inorganic contaminants including benzo(a)pyrene (30 ppm), PCBs (300 ppm), and lead (4,810 ppm). Approximately 1,819 people reside within a one-mile radius.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☒ OBSERVED (DATE: 1/30/92) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

An on-site trash dump was observed by ARCS III on January 30, 1992.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None reported or observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 58,394

IV. COMMENTS

None

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

HALLIBURTON NUS ARCS III. Site inspection; site visit. Project No. 3263-09, January 30, 1992.

ORIGINAL

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
[X] A. NPDES	PA0013293	unknown	12/23/88	
[ ] B. UIC				
[ ] C. AIR				
[ ] D. RCRA				
[ ] E. RCRA INTERIM STATUS				
[ ] F. SPCC PLAN				
[ ] G. STATE (Specify)				
[ ] H. LOCAL (Specify)				
[ ] I. OTHER (Specify)				
[ ] J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
[ ] A. SURFACE IMPOUNDMENT		
[ ] B. PILES		
[X] C. DRUMS, ABOVE GROUND	75 to 100	drums
[X] D. TANK, ABOVE GROUND	21	tanks
[X] E. TANK, BELOW GROUND	2	tanks
[ ] F. LANDFILL		
[ ] G. LANDFARM		
[X] H. OPEN DUMP	unknown	
[X] I. OTHER (Specify) tanker trucks	4	

04 TREATMENT (Check all that apply) — N/A

- [ ] A. INCINERATION
- [ ] B. UNDERGROUND INJECTION
- [ ] C. CHEMICAL/PHYSICAL
- [ ] D. BIOLOGICAL
- [ ] E. WASTE OIL PROCESSING
- [ ] F. SOLVENT RECOVERY
- [ ] G. OTHER RECYCLING/RECOVERY
- [ ] H. OTHER (Specify)

05 OTHER

- [X] A. BUILDINGS ON SITE

06 AREA OF SITE

125 (Acres)

07 COMMENTS

The site, abandoned since 1986, had been used as a whiskey distillery, a whiskey warehousing operation, and an antifreeze and ammonia-based cleaner repackaging operation. NUS FIT 3 recommended action by EPA Emergency Response after observing numerous drums and tanks on site during a preliminary assessment in February 1991.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

[ ] A. ADEQUATE, SECURE [ ] B. MODERATE [X] C. INADEQUATE, POOR [ ] D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

No liners exist for on-site soil contamination detected by ARCS III on January 30, 1992.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: [X] YES [ ] NO

02 COMMENTS

On-site surface soil contamination was detected by ARCS III on January 30, 1992. Site access is unrestricted.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

EPA file information.

HALLIBURTON NUS ARCS III. Site inspection; site visit. Project No. 3263-09, January 30, 1992.

EPA ORIGINAL (Red)

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. [X]	B. [X]
NON-COMMUNITY	C. [ ]	D. [X]

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. [ ]	B. [ ]	C. [ ]
D. [ ]	E. [ ]	F. [ ]

03 DISTANCE TO SITE

A. Approximately 0.1 (mi)

B. Approximately 100 to 200 feet (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

[X] A. ONLY SOURCE FOR DRINKING

[ ] B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)

[ ] C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available)

[ ] D. NOT USED, UNUSABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
19,500	100 to 200 feet (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
Estimated 0 to 70 (ft)	west through south	Estimated 0 to 70 (ft)	432,000 (gpd)	[ ] YES [X] NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

(b) (9) [redacted]

10 RECHARGE AREA	11 DISCHARGE AREA
[X] YES [ ] NO	[X] YES [ ] NO
COMMENTS: Groundwater recharge from precipitation that infiltrates site soils and rock to saturated zone.	COMMENTS: Expected groundwater discharge to Schuylkill River

IV. SURFACE WATER

01 SURFACE WATER USE IN VICINITY (Check one)

[X] A. RESERVOIR, RECREATION DRINKING WATER SOURCE

[ ] B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES

[ ] C. COMMERCIAL, INDUSTRIAL

[ ] D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME	AFFECTED	DISTANCE TO SITE
Schuylkill River	[X]	0 (mi)
	[ ]	(mi)
	[ ]	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 1,819 NO. OF PERSONS	B. 12,965 NO. OF PERSONS	C. 18,308 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

< 0.1 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
4,647	< 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The residential town of Linfield is adjacent to and north-northeast of the site. The residential towns of Parker Ford and Pennhurst are across the Schuylkill River from the site to the west and south, respectively.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} – 10^{-8} cm/sec ☐ B. 10^{-4} – 10^{-6} cm/sec ☐ C. 10^{-4} – 10^{-3} cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

10^{-3} to 10^{-5} cm/sec

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE (10^{-4} – 10^{-6} cm/sec) ☒ C. RELATIVELY PERMEABLE (10^{-2} – 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
Approximately 0 to 15 (ft)	unknown (ft)	4.5 to 7.0

06 NET PRECIPITATION	07 ONE-YEAR 24-HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
11.5 (in)	2.5 (in)	10 %	southwest	10 %

09 FLOOD POTENTIAL

SITE IS IN 500 YEAR FLOOD PLAIN

10 N/A

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5-acre minimum)

ESTUARINE	OTHER
A. N/A (mi)	B. 0.1 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES:

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS	
		PRIME AG LAND	AG LAND
A. 0.5 (mi)	B. < 0.1 (mi)	C. unknown (mi)	D. (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site lies within a meander of the Schuylkill River, which borders the site to the west and south and is approximately 2,500 feet to the east.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

ORIGINAL (Red)

EPA POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3	Organic: Compuchem Inorganic: Keytx	current
SURFACE WATER	6	Organic: Compuchem Inorganic: Keytx	current
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	14	Organic: Compuchem Inorganic: Keytx	current
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
pH	Surface water pH levels ranged from 6.70 to 6.97.
HNU	No readings above background were recorded.
Mini-Alert	No readings above background were recorded.

IV. PHOTOGRAPHS AND MAPS

01 TYPE [x] GROUND [ ] AERIAL

02 IN CUSTODY OF U.S. EPA (Name of organization or individual)

03 MAPS [X] YES [ ] NO

04 LOCATION OF MAPS: HALLIBURTON NUS ARCS III

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

HALLIBURTON NUS ARCS III. Site inspection; site visit. Project No. 3263-09, January 30, 1992.

EPA

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
PA	2898

II. CURRENT OWNER(S) / PARENT COMPANY *(if applicable)*

II. CURRENT OWNER(S)		PARENT COMPANY *(if applicable)*	
01 NAME	888 Warehousing, Incorporated	10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	527 Redford Avenue	12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY	Brooklyn	14 CITY	
06 STATE	NY	15 STATE	
07 ZIP CODE	11211	16 ZIP CODE	
01 NAME		10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*		12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY		14 CITY	
06 STATE		15 STATE	
07 ZIP CODE		16 ZIP CODE	
01 NAME		10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*		12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY		14 CITY	
06 STATE		15 STATE	
07 ZIP CODE		16 ZIP CODE	
01 NAME		10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*		12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY		14 CITY	
06 STATE		15 STATE	
07 ZIP CODE		16 ZIP CODE	

III. PREVIOUS OWNERS(S) *(List most recent first)* / IV. REALTY OWNER(S) *(if applicable, list most recent first)*

III. PREVIOUS OWNERS(S) *(List most recent first)*		IV. REALTY OWNER(S) *(if applicable, list most recent first)*	
01 NAME	Publicker Industries, Incorporated	10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	777 West Putnam Avenue	12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY	Greenwich	14 CITY	
06 STATE	CT	15 STATE	
07 ZIP CODE	06836	16 ZIP CODE	
01 NAME		10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*		12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY		14 CITY	
06 STATE		15 STATE	
07 ZIP CODE		16 ZIP CODE	
01 NAME		10 NAME	
02 D & B NUMBER		11 D & B NUMBER	
03 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*		12 STREET ADDRESS *(P.O. Box, RFD #, Etc.)*	
04 SIC CODE		13 SIC CODE	
05 CITY		14 CITY	
06 STATE		15 STATE	
07 ZIP CODE		16 ZIP CODE	

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

EPA ORIGINAL (Red)

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. CURRENT OPERATOR *(Provide if different from owner)*

01 NAME	02 D & B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY *(if applicable)*

10 NAME	11 D & B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, Etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR (S) *(List most recent first; provide if different from owner)*

PREVIOUS OPERATOR'S PARENT COMPANIES *(if applicable)*

01 NAME	02 D & B NUMBER	10 NAME	11 D & B NUMBER
N/A		N/A	

03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, Etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

01 NAME	02 D & B NUMBER	10 NAME	11 D & B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, Etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

01 NAME	02 D & B NUMBER	10 NAME	11 D & B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, Etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

ORIGINAL (red)

II. ON-SITE GENERATOR

01 NAME	02 D & B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D & B NUMBER	01 NAME	02 D & B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D & B NUMBER	01 NAME	02 D & B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D & B NUMBER	01 NAME	02 D & B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D & B NUMBER	01 NAME	02 D & B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, Etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

EPA ORIGINAL (Red)

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2898

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ H. ON-SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2898

II. PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
N/A

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

EPA

ORIGINAL (Red)

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2898

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ACTION [X] YES [ ] NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

On September 5, 1972, the facility was found to be in violation of the Clean Streams Law by the Pennsylvania Department of Environmental Resources after an inspection revealed several discharges to the Schuylkill River without a permit. These discharges included deionized wastewater, cooling water, sink wastewater, water softener waste, and septic tank seepage.

An October 31, 1973 PA DER inspection found the facility still in violation of the Clean Streams Law.

On February 8, 1974, the facility was fined $250 by PA DER for violations of the Clean Streams Law.

On April 12, 1975, a PA DER inspection found that the facility's septic system was overflowing. Two discharges from the site were sampled and analyzed. Both contained unacceptable BOD levels and one contained ethyl glycol alcohol. This was a violation of the Clean Streams Law.

In a March 19, 1976 administrative conference with the facility, PA DER required the pumping of the existing septic tank as soon as the new tile field was in operation and the submission of a NPDES permit application.

On July 13, 1979, PA DER required the facility to submit a permit for the discharges to groundwater via a limestone pit.

On April 27, 1983, a PA DER inspection revealed the discharge of non-contact compressor cooling water to a storm sewer tributary to the Schuylkill River.

On December 6, 1984, PA DER conducted an inspection of the facility in response to citizens' complaints of eye and nasal irritation caused by the cooling water discharge. The inspection revealed that the facility was processing an ammonia-based cleaner. A sample of the discharge contained 5 ppb phenol and a BOD concentration greater than 405 ppm. On May 8, 1985, PA DER found the facility in violation of its NPDES permit when a sample of the non-contact cooling water discharge contained a BOD concentration of 11.5 ppm.

On August 13, 1985, PA DER found the facility to be in violation of the Clean Streams Law because of various potential sources of pollution at the site that could impact the NPDES discharge.

On March 14 and 27, 1991, EPA Emergency Response performed a removal site inspection after NUS Corporation, FIT 3 found numerous tanks and drums on site during a preliminary assessment on February 19, 1991. Many of the drums observed by the FIT (approximately 75; 25 contained material) had been moved into an on-site warehouse by the site owner. The large on-site holding tanks were found to be empty. Numerous drums and containers were observed inside the various buildings. No removal or enforcement action was performed. The OSC planned to work with the site owner to address safety concerns posed by the unrestricted site access and the materials haphazardly stored on site.

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

NUS Corporation, FIT 3. Preliminary assessment. TDD No. F3-9008-01, June 27, 1991.

EPA file information.

SECTION 6.0

6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

1. United States Geological Survey. Phoenixville, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1955, photorevised 1983. Combined with Collegeville, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1966, photorevised 1983; Pottstown, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1956, photorevised 1968 and 1973; and Sassamansville, Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1957, photorevised 1990.

2. HALLIBURTON NUS Environmental Corporation, FIT 3. Preliminary Assessment. TDD No. F3-9008-01, June 27, 1991.

3. NUS Corporation, FIT 3. Site discovery report; Township of Limerick. TDD No. F3-9003-06, June 22, 1990.

4. HALLIBURTON NUS Environmental Corporation. Site inspection; site visit. Project No. 3263-09, January 30, 1992.

5. Oestreicher, Eugene, Linfield Industrial Park, with (b) (4) NUS FIT 3. Telecon. January 23, 1991.

6. Herman, David L., Publicker Industries, Incorporated, to Joseph A. Feola, Pennsylvania Department of Environmental Resources. Correspondence. June 9, 1986.

7. Bretherick, Robert P., Publicker Packaging Services, Division of Publicker Industries, Incorporated, to Marilyn Shup, Pennsylvania Department of Environmental Resources. Correspondence. September 9, 1985.

8. Paly, John F., Pennsylvania Department of Environmental Resources, to H.E. Huber, Continental Distilling Corporation. Correspondence. September 5, 1972.

9. Laregrina, James, Pennsylvania Department of Environmental Resources, to Robert Bretherick, Publicker Industries, Incorporated. Correspondence. January 22, 1985.

10. Pennsylvania Department of Environmental Resources, to Lee Vernon, Publicker Industries, Incorporated. Correspondence. January 22, 1974.

11. Simple, Andrew K., Pennsylvania Department of Environmental Resources, to Lee Vernon, Continental Distilling Corporation. Correspondence. February 27, 1974.

12. Minkle, Richard L., Pennsylvania Department of Environmental Resources, to Richard Grace, Continental Distilling Corporation. Correspondence. February 10,1975.

13. Manley, Guy B., Pennsylvania Department of Environmental Resources, to Harold Grams, Continental Distilling Corporation. Correspondence. July 10, 1975.

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15. Manley, Guy B., Pennsylvania Department of Environmental Resources, to Howard Grace, Continental Distilling Corporation. Correspondence. March 24, 1976.

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17. Pennsylvania Department of Environmental Resources, to Continental Distilling Corporation. Correspondence. July 13, 1979.

18. Strautins, Mary, Pennsylvania Department of Environmental Resources, to Continental Distilling Corporation. Correspondence. January 11, 1983.

19. Pennsylvania Department of Environmental Resources, to Joseph Trisch, Publicker Industries. Correspondence. May 5, 1973.

20. Laregrina, James, Pennsylvania Department of Environmental Resources, to Robert Bretherick, Publicker Industries, Incorporated. Correspondence. January 22, 1985.

21. Laregrina, James, Pennsylvania Department of Environmental Resources, to Robert Bretherick, Publicker Industries, Incorporated. Correspondence. May 8, 1985.

22. Shup, Marilyn, Pennsylvania Department of Environmental Resources, to Robert Bretherick, Publicker Industries, Incorporated. Correspondence. August 13, 1985.

23. Shaner, Donald, Pennsylvania Department of Environmental Resources, to Publicker Packaging Service. Correspondence. May 11, 1987.

24. Powell, M., United States Environmental Protection Agency, Emergency Response Section. POLREP No. 1, Linfield Industrial Park Assessment. March 15, 1991.

25. Matlock, D., EPA Emergency Response Section. POLREP No. 2, Linfield Industrial Park, March 29, 1991.

26 Powell, Marty, United States Environmental Protection Agency, Emergency Response Section, with (b) (4) , HALLIBURTON NUS ARCS III. Telecon. March 12, 1992.

27. Shup, Marilyn, Pennsylvania Department of Environmental Resources, to Robert Bretherick, Publicker Industries, Incorporated. Correspondence. August 13, 1985.

28. Grace, Howard, Continental Distilling Corporation, to Guy E. Manley, III, Pennsylvania Department of Environmental Resources. Correspondence. July 14, 1975.

29. Bretherick, Robert P., Publicker Packaging Services, to John Minahan, Pennsylvania Department of Environmental Resources. Correspondence. December 23, 1985.

30. Montgomery County Planning Commission. 1986 Existing Water Facilities Map, Montgomery County, Pennsylvania. 1986.

31. Montgomery County Planning Commission. Water Service Plan. February 1979.

32. Chester County Planning Commission. Community Facilities Inventory, Chester County, Pennsylvania. Volume 2, Water Facilities. December 1985.

33. Crossman, Gary, Citizens' Utilities Home Water Company, with (b) (4) , NUS FIT 3. Telecon. March 9, 1990.

34. Crossman, Gary, Citizens' Utilities Home Water Company, with (b) (4), NUS FIT 3. Telecon. September 12, 1989.

35. Pennsylvania Department of Environmental Resources, State Water Plan Division, Water Use Data System. Public Water Supply Facility Records, Citizens' Utilities Home Water Company, Report Year 1989. November 20, 1991.

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39. (b) (6), Water Plant Employee, Borough of Phoenixville Water System, with (b) (4), NUS FIT 3. Telecon. May 23, 1990.

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41. Pennsylvania Department of Environmental Resources, State Water Plan Division. Water Use Data System, Public Water Supply Facilities Records, Philadelphia Suburban Water Company, Report Year 1990. April 6, 1992.

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43. Luteweiler, Preston, Philadelphia Suburban Water Company, with (b) (4), NUS FIT 3. Meeting. June 28, 1990.

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46. Keily, Tom, Philadelphia Suburban Water Company, with (b) (4), NUS FIT 3. Telecon. March 9, 1990.

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53. McCreery, Laurence J., and Ronald A. Sloto, United States Geological Survey. Groundwater Resources of Chester County, Pennsylvania. Water Resources Investigation 77-67, Open-File Report, September 1977.

54. Longwill, Stanley M., and Charles R. Wood, Pennsylvania Department of Internal Affairs, Topographic and Geologic Survey. Groundwater Resources of the Brunswick Formation in Montgomery and Berks Counties, Pennsylvania. Groundwater Report W22, 1965.

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56. Berg, Thomas M., et al., Pennsylvania Department of Environmental Resources, Bureau of Topographic and Geologic Survey. Stratigraphic Correlation Chart of Pennsylvania. General Geology Report 75, 1983.

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SECTION 7.0

7.0 LABORATORY DATA

7.1 SAMPLE DATA SUMMARY

The attached data summary contains only analytes which were identified as detected in at least one sample. The complete list of compounds analyzed for, their results, and the associated detection limits are located as an appendix. Results for tentatively identified compounds appear following the organic data section of this report.

The following codes are used in the data summary to indicate the confidence in the laboratory results:

CODES RELATING TO IDENTIFICATION
(confidence concerning presence or absence of analytes):

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation or detection limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation or detection limit may be inaccurate or imprecise.

UL = Not detected, quantitation or detection limit is probably higher.

OTHER CODES

Q = No analytical result.

SELECTED SAMPLE ORDER

SITE NAME: Linfield Industrial Park
TDD NUMBER: F3-3263-09
LAB NAMES: ORG: Compu INORG: Keytx

SAMPLING DATE(s): 1/28/92
CASE NUMBER:17744

STATE/COUNTY CODE: PA-091
EPA NUMBER: 2898

SAMPLE NUMBER:	CHY02	CHY03	CHY04	CHY05	CHY06	CHY07	CHY08	CHY09	CHY10	CHY24	CHY11	CHY12	CHY13
SAMPLE ID:	PSW-1	[redacted]	[redacted]	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	AQ-0	SD-1	SD-2	SD-3
LOCATION:	CUHMC potable no treat clear,no odr	potable no treat clear,no odr	potable no treat clear,no odr	UPSTREAM FRO M SCHUYLKILL RIVER, UNDER MAIN ST.BRIG	MIDSTREAM ON SCHUYLKILL R AT FORMER NPDES DISCHG	ONSITE DRAIN AGE DITCH;30 FEET FROM CO NFL.W/SCHU.R	DOWNSTREAM SAMPLE FROM SCHUYLKILL RIVER	CUHMC; SCHUY LKILL RIVER INTAKE, ACRO SS FROM SITE	DUPLICATE OF SW-4 SAME LOCATION AS SW-4	AQUEOUS BLANK	UPSTREAM ON SCHUYLKILL R UNDER MAIN ST. BRIDGE	MID-STREAM ON SCHUYL.R. AT FORMER NPDES DISCHG	ON-SITE DRAN DITCH; 30 FT FROM CONFL. W/ SCHUYL.R.
PH:				6.9	6.7	6.7	6.9				6.3	6.4	6.5
FIELD MEASUREMENTS:	none>bkg hnu	none>bkg hnu	none>bkg hnu	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
PERCENT SOLIDS:											71.0%	45.0%	64.0%
TYPE OF DATA: ****** VOLATILES													
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.4	2.2	1.6

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: / UNITS:	CHY02 ug/l	CHY03 ug/l	CHY04 ug/l	CHY05 ug/l	CHY06 ug/l	CHY07 ug/l	CHY08 ug/l	CHY09 ug/l	CHY10 ug/l	CHY24 ug/l	CHY11 ug/kg	CHY12 ug/kg	CHY13 ug/kg
10.00	methylene chloride	24.00 B	37.00 B	57.00 B	16.00B	32.00B	54.00B	22.00B	73.00B	7.00 B	180.00	50.00B	88.00B	87.00B
10.00	acetone	14.00 B							34.00 B			54.00B	96.00B	54.00B
10.00	2-butanone													
10.00	1,1,1-trichloroethane											3.00 J		
10.00	4-methyl-2-pentanone													
10.00	toluene													
10.00	ethylbenzene													
10.00	total xylenes	1.00 J												
TYPE OF DATa: ****** SEMIVOLATILES														
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	92.0	72.0	51.0

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: / UNITS:	CHY02 ug/l	CHY03 ug/l	CHY04 ug/l	CHY05 ug/l	CHY06 ug/l	CHY07 ug/l	CHY08 ug/l	CHY09 ug/l	CHY10 ug/l	CHY24 ug/l	CHY11 ug/kg	CHY12 ug/kg	CHY13 ug/kg
10.00	phenol												75.00J	
10.00	4-methylphenol												95.00J	
10.00	1,2,4-trichlorobenzene													
10.00	naphthalene													
10.00	2-methylnaphthalene													
10.00	acenaphthylene											100.00 J		
10.00	acenaphthene											180.00J		
50.00	4-nitrophenol						1.00 J							
10.00	dibenzofuran											120.00J		
10.00	diethyl phthalate											180.00 B		76.00 B
10.00	fluorene											270.00J		
10.00	phenanthrene											2400.00	150.00J	72.00J
10.00	anthracene											550.00J		
10.00	di-n-butyl phthalate												79.00 B	
10.00	fluoranthene											5500.00	360.00J	150.00J
10.00	pyrene											2300.00 J	320.00 J	130.00 J
10.00	butylbenzyl phthalate												76.00 B	
10.00	benzo(a)anthracene											2300.00	210.00J	100.00J
10.00	chrysene											1800.00	210.00J	100.00J
10.00	bis(2-ethylhexyl)phthalate	2.00 B				2.00 B						280.00 B	350.00 B	53.00 B
10.00	benzo(b)fluoranthene											4000.00	250.00 J	180.00 J
10.00	benzo(k)fluoranthene												170.00 J	
10.00	benzo(a)pyrene											1800.00	180.00J	110.00J
10.00	indeno(1,2,3-cd)pyrene											1200.00	86.00J	86.00J
10.00	dibenz(a,h)anthracene											470.00J		
10.00	benzo(g,h,i)perylene											1200.00 N	87.00J	91.00J
10.00	carbazole											250.00J		
TYPE OF DATa: ****** PESTICIDES														
DILUTION FACTOR:		1.0	1.0	1000.0	1000.0	1000.0	1.0	1000.0	1000.0	1000.0	1.0	46.0	73.0	51.0

SELECTED SAMPLE ORDER

SITE NAME: Linfield Industrial Park SAMPLING DATE(s): 1/28/92 STATE/COUNTY CODE: PA-091
TDD NUMBER: F3-3203-09 CASE NUMBER:17744 EPA NUMBER: 2898
LAB NAMES: ORG: Compu INORG: Keytx

SAMPLE NUMBER:	CHY02	CHY03	CHY04	CHY05	CHY06	CHY07	CHY08	CHY09	CHY10	CHY24	CHY11	CHY12	CHY13
SAMPLE ID:	PSW-1	(b) (6)	(b) (6)	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	AQ-0	SD-1	SD-2	SD-3
LOCATION:	CUHMC potable no treat clear,no odr	potable no treat clear,no odr	potable no treat clear,no odr	UPSTREAM FROM SCHUYLKILL RIVER, UNDER MAIN ST.BRIG	MIDSTREAM ON SCHUYLKILL R AT FORMER NPDES DISCHG	ONSITE DRAINAGE DITCH;30 FEET FROM CONFL.W/SCHU.R	DOWNSTREAM SAMPLE FROM SCHUYLKILL RIVER	CUHMC; SCHUYLKILL RIVER INTAKE. ACROSS FROM SITE	DUPLICATE OF SW-4 SAME LOCATION AS SW-4	AQUEOUS BLANK	UPSTREAM ON SCHUYLKILL R UNDER MAIN ST. BRIDGE	MID-STREAM ON SCHUYL.R. AT FORMER NPDES DISCHG	ON-SITE DRAN DITCH; 30 FT FROM CONFL. W/ SCHUYL.R.
PH:				6.9	6.7	6.7	6.9				6.3	6.4	6.5
FIELD MEASUREMENTS:	none>bkg hnu	none>bkg hnu	none>bkg hnu	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
PERCENT SOLIDS:											71.0%	45.0%	64.0%
TYPE OF DATA: ****** PESTICIDES	**********												
DILUTION FACTOR:	1.0	1.0	1000.0	1000.0	1000.0	1.0	1000.0	1000.0	1000.0	1.0	45.0	33.0	51.0

DET. LIMIT CRQL [*=IQL]	SAMPLE NUMBER:	CHY02	CHY03	CHY04	CHY05	CHY06	CHY07	CHY08	CHY09	CHY10	CHY24	CHY11	CHY12	CHY13
	UNITS:	ug/l	ug/l	ng/l	ng/l	ng/l	ug/l	ng/l	ng/l	ng/l	ug/l	ug/kg	ug/kg	ug/kg
0.05	alpha-BHC											3.40 R	0.38 R	
0.05	beta-BHC													
0.05	delta-BHC											1.50DR		
0.05	gamma-BHC (lindane)											34.00 R		
0.05	heptachlor												0.13 B	0.14 B
0.05	aldrin											4.40 R	1.10 R	0.33 R
0.05	heptachlor epoxide											1.70DR		0.24 R
0.05	endosulfan I													
0.10	dieldrin													0.46 R
0.10	4,4'-DDE												4.40 R	
0.10	endrin											3.90DR		1.60 R
0.10	endosulfan II												2.50 R	0.32 R
0.10	4,4'-DDD				5.30 R	7.10 R		4.60 R	5.00 R	4.90 R		2.80 R	4.80 R	
0.10	endosulfan sulfate												4.70 R	
0.10	4,4'-DDT												3.20 R	
0.50	methoxychlor							14.00 R				7.80 R	15.00 R	2.70 B
0.10	endrin ketone											3.80 R		0.65 R
0.05	alpha chlordane			2.90 R								5.30 R	4.10 R	0.26 R
0.05	gamma chlordane											2.70DR	3.50 R	0.13 R
1.00	aroclor-1260													
1.00	endrin aldehyde												2.60 R	

Comments: **********
sample quant.limit=dil.factor x CRQL D=result reported from diluted re-analys
C= confirmed by GC/MS

SELECTED SAMPLE ORDER

SITE NAME: Linfield Industrial Park | SAMPLING DATE(s): 1/28/92 | STATE/COUNTY CODE: PA-091
TDD NUMBER: F3-3283-09 | CASE NUMBER:17744 | EPA NUMBER: 2898
LAB NAMES: ORG: Compu INORG: Keytx

SAMPLE NUMBER:	CHY14	CHY15	CHY16	CHY17	CHY18	CHY19	CHY22	CHY20	CHY21	CHY23	CHY26	CHY25
SAMPLE ID:	SD-4	S-1	S-2	S-3	S-4	S-5	S-6	S-6	S-7	S-9	S-10	S-0
LOCATION:	DOWNSTREAM SAMPLE ON SCHUYLKILL RIVER	AT BASE OF TRANSFORMER ON NORTH SID E OF DISTIL.	AT DRUMS OUTSIDE OF SHED WEST OF DISTILLERY.	INSIDE ABOVE GROUND TANK FARM ON EAST SIDE BLDG.2	AT CONFLU. W/2 CONCRETE DRAIN. TROUG HS SW WAREHS	AT CORRUGATD PIPE OUTFALL SOUTH AND WE ST OF WAREHS	DUPLICATE OF S-5 SAME LOCATIO N AS S-5	SE EDGE OF TRASH DUMP WEST OF WAREHOUSES	10-FT. SOUTH OF DRUMS BY TRASHDUMP WE ST OF WAREHS	IN SOUTHERN AREA OF SITE AN AREA OF STRESS. VEG.	ACROSS MAIN STREET FROM SITE	TRIP BLANK
PH:	6.2	6.7	6.0	6.6	6.1	6.2	6.4	6.7	6.6	6.6	6.0	
FIELD MEASUREMENTS:	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
PERCENT SOLIDS:	44.0%	81.0%	38.0%	78.0%	72.0%	76.0%	80.0%	65.0%	65.0%	78.0%	68.0%	
TYPE OF DATA: ****** VOLATILES ******												
DILUTION FACTOR:	2.3	1.2	2.6	1.3	1.4	1.3	1.2	1.5	1.5	1.3	1.5	1.0

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: UNITS:	CHY14 ug/kg	CHY15 ug/kg	CHY16 ug/kg	CHY17 ug/kg	CHY18 ug/kg	CHY19 ug/kg	CHY22 ug/kg	CHY20 ug/kg	CHY21 ug/kg	CHY23 ug/kg	CHY26 ug/kg	CHY25 ug/l
10.00	methylene chloride	54.00B	49.00B	120.00B	45.00B	52.00B	47.00B	56.00B	70.00B	51.00B	68.00B	83.00B	150.00
10.00	acetone	39.00B	61.00B	420.00B	28.00B	25.00B	57.00B	61.00B	69.00B	86.00B	37.00B	73.00B	
10.00	2-butanone			160.00									
10.00	1,1,1-trichloroethane												
10.00	4-methyl-2-pentanone			340.00									
10.00	toluene			120.00									
10.00	ethylbenzene			100.00									
10.00	total xylenes			690.00									
TYPE OF DATA: ****** SEMIVOLATILES ******													
DILUTION FACTOR:		74.0	1000.0	1700.0	84.0	45.0	86.0	41.0	750.0	250.0	42.0	48.0	9.0

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: UNITS:	CHY14 ug/kg	CHY15 ug/kg	CHY16 ug/kg	CHY17 ug/kg	CHY18 ug/kg	CHY19 ug/kg	CHY22 ug/kg	CHY20 ug/kg	CHY21 ug/kg	CHY23 ug/kg	CHY26 ug/kg	CHY25 n/a
10.00	phenol												
10.00	4-methylphenol												
10.00	1,2,4-trichlorobenzene		2300.00 J										
10.00	naphthalene			4500.00J			150.00J	71.00J@	2500.00 J				
10.00	2-methylnaphthalene			8000.00J			95.00J	75.00 J	790.00J				
10.00	acenaphthylene												
10.00	acenaphthene				98.00J	89.00 J	440.00J	150.00J@	9000.00	350.00J			
50.00	4-nitrophenol												
10.00	dibenzofuran						130.00J	61.00J@	2900.00 J				
10.00	diethyl phthalate										54.00 B		
10.00	fluorene			2600.00J		66.00 J	180.00J	89.00J@	4100.00 J				
10.00	phenanthrene	330.00J	2900.00J	6500.00J	620.00J	1400.00DJ	2300.00 J	900.00J@	52000.00DJ	3500.00 J		77.00J	
10.00	anthracene	77.00J				140.00 J	450.00J	150.00J@	14000.00	920.00J			
10.00	di-n-butyl phthalate												
10.00	fluoranthene	790.00	7100.00J	4900.00J	1200.00 J	3900.00DJ	4100.00 J	1500.00J@	72000.00DJ	8800.00 J	79.00J	170.00J	
10.00	pyrene	450.00 J	4900.00 J	11000.00 J	920.00 J	3300.00DJ	2000.00 J	1300.00J@	54000.00DJ	3500.00 J	63.00J	99.00J	
10.00	butylbenzyl phthalate	130.00 B								470.00 B			
10.00	benzo(a)anthracene	420.00J	3000.00J	5200.00J	630.00J	1700.00	1400.00	730.00 @	33000.00	4500.00		72.00J	
10.00	chrysene	340.00J	3600.00J	4300.00J	610.00J	2100.00D	1500.00	880.00 @	32000.00	3900.00	44.00J	96.00J	
10.00	bis(2-ethylhexyl)phthalate	350.00 B	1300.00 B	7500.00 B					1600.00 B				
10.00	benzo(b)fluoranthene	360.00 J	7600.00 J	3900.00 J	1500.00 J	4500.00DJ	2100.00 J	1600.00J@	46000.00 J	6600.00 J	64.00 J	105.00 J	
10.00	benzo(k)fluoranthene	240.00 J			1500.00 J		830.00 J	570.00J@	15000.00 J	3800.00 J		63.00 J	
10.00	benzo(a)pyrene	360.00J	3700.00J	3700.00J	480.00J	1900.00DJ	1500.00 J	550.00J@	30000.00 J	6900.00 J		86.00J	
10.00	indeno(1,2,3-cd)pyrene	220.00J	2400.00J		500.00J	1700.00D	1100.00	370.00 @	15000.00D	3800.00			
10.00	dibenz(a,h)anthracene	78.00J			200.00J	350.00 J	400.00 J	180.00J@	5300.00 J	1700.00J			
10.00	benzo(g,h,i)perylene	190.00J	2100.00J	7800.00J	520.00 J	1800.00D	1000.00	510.00 @	7600.00	3500.00			
10.00	carbazole				100.00J	180.00 J	330.00J	120.00J@	11000.00	710.00J			
TYPE OF DATA: ****** PESTICIDES ******													
DILUTION FACTOR:		76.0	510.0	86.0	42.0	46.0	43.0	41.0	50.0	51.0	42.0	48.0	0.0

DET. LIMIT	SAMPLE NUMBER:	CHY14	CHY15	CHY16	CHY17	CHY18	CHY19	CHY22	CHY20	CHY21	CHY23	CHY26	CHY25

SELECTED SAMPLE ORDER

SITE NAME: Linfield Industrial Park | SAMPLING DATE(s): 1/28/92 | STATE/COUNTY CODE: PA-091
TDD NUMBER: F3-3263-09 | CASE NUMBER:17744 | EPA NUMBER: 2898
LAB NAMES: ORG: Compu INORG: Keytx

SAMPLE NUMBER:	CHY14	CHY15	CHY16	CHY17	CHY18	CHY19	CHY22	CHY20	CHY21	CHY23	CHY26	CHY25
SAMPLE ID:	SD-4	S-1	S-2	S-3	S-4	S-5	S-8	S-6	S-7	S-9	S-10	S-0
LOCATION:	DOWNSTREAM SAMPLE ON SCHUYLKILL RIVER	AT BASE OF TRANSFORMER ON NORTH SID E OF DISTIL.	AT DRUMS OUTSIDE OF SHED WEST OF DISTILLERY.	INSIDE ABOVE GROUND TANK FARM ON EAST SIDE BLDG.2	AT CONFLU. W/2 CONCRETE DRAIN. TROUG HS SW WAREHS	AT CORRUGATD PIPE OUTFALL SOUTH AND WE ST OF WAREHS	DUPLICATE OF S-5 SAME LOCATIO N AS S-5	SE EDGE OF TRASH DUMP WEST OF WAREHOUSES	10-FT. SOUTH OF DRUMS BY TRASHDUMP WE ST OF WAREHS	IN SOUTHERN AREA OF SITE AN AREA OF STRESS. VEG.	ACROSS MAIN STREET FROM SITE	TRIP BLANK
PH:	6.2	6.7	6.0	6.6	6.1	6.2	6.4	6.7	6.6	6.6	6.0	
FIELD MEASUREMENTS:	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
PERCENT SOLIDS:	44.0%	81.0%	38.0%	78.0%	72.0%	76.0%	80.0%	65.0%	65.0%	78.0%	68.0%	
TYPE OF DATA: ****** PESTICIDES	**********											
DILUTION FACTOR:	76.0	810.0	86.0	42.0	46.0	43.0	41.0	50.0	51.0	42.0	48.0	

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: CHY14	CHY15	CHY16	CHY17	CHY18	CHY19	CHY22	CHY20	CHY21	CHY23	CHY26	CHY25
UNITS:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	n/a
0.05 alpha-BHC	0.36 R	11.00 R	1.10 R			0.08 R						
0.05 beta-BHC			3.90 R					1.30 R		0.87 R	0.28 R	
0.05 delta-BHC	5.50DR											
0.05 gamma-BHC (lindane)	34.00DR	3.40 R	4.40 R	14.00 R					0.18 R		0.09 R	
0.05 heptachlor			0.16 B	16.00 R		0.15 B		1.80 R	0.81 B	0.23 B	0.19 B	
0.05 aldrin	4.30 R	12.00 R	2.60 R	14.00 R	0.36 R	0.39 R		5.60 R	1.40 R		0.56 R	
0.05 heptachlor epoxide	5.60 R			0.19 R	0.54 R	0.41 R		2.30 R				
0.05 endosulfan I	14.00DR		0.37 R									
0.10 dieldrin	3.30DR		37.00 R	31.00 R	0.27 R	0.10 R	6.20 R	14.00 R	2.40 R		0.26 R	
0.10 4,4'-DDE			13.00 R		2.80 R	1.10 R	1.60 R	11.00 R	6.40 R		0.80 R	
0.10 endrin	*4.50DR*		*46.00 R*	*39.00 R*	*2.60 R*	*1.50 R*		*34.00 R*		*1.40 R*	*3.30 R*	
0.10 endosulfan II			64.00 R	2.20 R	2.60 R	0.46 R		20.00 R		0.41 R	0.28 R	
0.10 4,4'-DDD	4.30 R											
0.10 endosulfan sulfate	0.69 B		19.00 R									
0.10 4,4'-DDT	1.80DR			31.00 R	0.48 R		2.30 R		13.00 R		0.92 R	
0.50 methoxychlor	10.00 R		180.00 R	31.00 R	18.00 R	6.50 R	26.00 R	120.00 R	110.00 R	1.40 B		
0.10 endrin ketone	4.60 R						0.66 R					
0.05 alpha chlordane	6.20 R		11.00 R				3.50 R		2.40 R			
0.05 gamma chlordane	3.30 R		11.00 R	0.09 R	0.23 R		2.10 R	2.80 R	5.70 R			
1.00 aroclor-1260		300000.00DC							460.00			
1.00 endrin aldehyde	3.10 R		53.00 R					17.00 R	20.00 R	0.68 R		

Comments: **********

sample quant.limit=dil.factor X CRQL D=result reported from diluted re-analys
C= confirmed by GC/MS

SELECTED SAMPLE ORDER

SITE NAME: Linfield Industrial Park SAMPLING DATE(s): 1/28/92 STATE/COUNTY CODE: PA-091
TDD NUMBER: F3-3263-09 CASE NUMBER:17744 EPA NUMBER: 2898
LAB NAMES: ORG: Compu INORG: Keytx

SAMPLE NUMBER:	MCJE14	MCJE15	MCJE16	MCJE17	MCJE18	MCJE19	MCJE22	MCJE20	MCJE21	MCJE23	MCJE26
SAMPLE ID:	SD-4	S-1	S-2	S-3	S-4	S-5	S-8	S-6	S-7	S-9	S-10
LOCATION:	DOWNSTREAM SAMPLE IN SCHUYLKILL RIVER	AT BASE OF TRANSFORMER ON NORTH SID E OF DISTIL.	AT DRUMS OUTSIDE OF SHED WEST OF DISTILLERY	INSIDE ABOVE GROUND TANK FARM ON EAST SIDE BLDG.2	AT CONFLU.OF 2 CONCRETE DRAIN. TROUG HS;SW WAREHS	AT CORRUG. PIPE OUTFALL SOUTH AND WE ST OF WAREHS	DUPLICATE OF S-5 SAME LOCATIO N AS S-5	SE EDGE OF TRASH DUMP WEST OF WAREHOUSES	10-FEET SOUT H OF DRUMS NEAR TRASHDM W.OF WAREHSE	IN SOUTHERN PORTION OF SITE; AREAOF STRESS. VEG.	ACROSS MAIN STREET FROM SITE
PH:	6.2	6.7	6.0	6.6	6.1	6.2	6.4	6.7	6.6	6.6	6.0
FIELD MEASUREMENTS:	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
PERCENT SOLIDS:	43.2%	83.6%	43.7%	81.8%	76.0%	83.1%	74.8%	84.7%	74.9%	77.4%	67.9%
TYPE OF DATA: ****** INORGANICS	**********										
DILUTION FACTOR: : GFAA	0.463	0.239	0.458	0.244	0.263	0.241	0.268	0.309	0.267	0.258	0.295
: ICP	0.463	0.239	0.458	0.244	0.263	0.241	0.268	0.309	0.267	0.258	0.295
: Hg	1.160	0.600	1.140	0.611	0.658	0.602	0.668	0.773	0.668	0.646	0.736
: CN	0.120	0.060	0.114	0.061	0.066	0.060	0.067	0.077	0.066	0.065	0.074

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: / UNITS:	MCJE14 ug/kg	MCJE15 ug/kg	MCJE16 ug/kg	MCJE17 ug/kg	MCJE18 ug/kg	MCJE19 ug/kg	MCJE22 ug/kg	MCJE20 ug/kg	MCJE21 ug/kg	MCJE23 ug/kg	MCJE26 ug/kg
14.00	aluminum	10500.00	6810.00	2140.00	4970.00	3400.00	4170.00	5470.00	3780.00	5090.00	6230.00	6790.00
3.00	antimony									11.00		
2.00	arsenic	3.80 B	372.00	62.40 J	3.90 B	6.70 B	5.40 B	10.40	9.00	33.30	5.60 B	3.40 B
1200.00	barium	154.00	158.00	407.00	80.60	52.70	66.00	113.00	80.90	268.00	111.00	44.60
1.00	beryllium	2.10	0.70	0.55	0.71	0.51	0.58	0.78	0.53	0.65	1.00	0.72
3.00	cadmium	2.20	2.60	2.80					1.10	2.30		
7000.00	calcium	4560.00	1270.00	2220.00	1520.00	2110.00	1620.00	2670.00	12400.00	17600.00	1730.00	382.00
3.00	chromium	43.20	29.10	63.90	12.40	10.60	8.10	8.20	38.60	45.10	15.20	14.20
4.00	cobalt	59.70	14.30	9.60	8.60	6.40	7.50	8.70	8.80	14.80	11.10	9.90B
3.00	copper	105.00	42.70 J	71.50 J	15.40 J	10.00 J	7.10 J	17.00 J	81.70 J	388.00 J	20.10 J	13.50 J
6.00	iron	23000.00	37700.00	39000.00	12800.00	10800.00	9880.00	11600.00	10300.00	87800.00	20900.00	18100.00
1.00	lead (anal. by GFAA)	106.00	349.00	4810.00	35.70	18.20	16.90	22.20 J	253.00	358.00	20.20 J	17.80 J
37.00	magnesium	3100.00	1830.00	784.00	1040.00	937.00	1140.00	1070.00	4750.00	4860.00	1890.00	1250.00
2.00	manganese	1540.00	411.00	464.00	811.00	318.00	351.00	469.00	437.00	801.00	1090.00	366.00
0.20	mercury	0.35	0.18	2.90					0.23	0.33		
22.00	nickel	75.20	20.90	10.60	9.80	7.40	7.10	12.70	10.70	56.50	14.40	10.70
722.00	potassium	970.00	822.00		782.00	397.00	483.00	483.00	534.00	1100.00	883.00	582.00
2.00	selenium				0.71 B	0.63 B	0.60 B	0.59 B	0.96 B			0.82 B
30.00	sodium	195.00	129.00	52.40	64.50	43.50	115.00	91.00	63.40	219.00	41.10	32.10
4.00	vanadium	28.20	41.10	26.50	15.70	19.60	12.30	19.80	12.70	73.10	31.50	27.20
2.00	zinc	497.00	1230.00	651.00	200.00	169.00	201.00	206.00	226.00	1150.00	61.80	129.00
10.00	cyanide		0.68	1.80								

Comments: **********

C= confirmed by GC/MS

D=result reported from diluted re-analys
sample det.limit=dil.factor X IDL

SELECTED SAMPLE ORDER

SITE NAME: Linfield Industrial Park | SAMPLING DATE(s): 1/28/92 | STATE/COUNTY CODE: PA-091
TDD NUMBER: F3-3263-09 | CASE NUMBER:17744 | EPA NUMBER: 2898
LAB NAMES: ORG: Compu INORG: Keytx

SAMPLE NUMBER:	MCJE02	MCJE03	MCJE04	MCJE05	MCJE06	MCJE07	MCJE08	MCJE10	MCJE09	MCJE24	MCJE11	MCJE12	MCJE13
SAMPLE ID:	PSW-1	HW-1	HW-2	SW-1	SW-2	SW-3	SW-4	SW-6	SW-5	AQ-0	SD-1	SD-2	SD-3
LOCATION:	CUHWC potable no treat clear,no odr	Zwolak potable no treat clear,no odr	Brown, potable no treat clear,no odr	UPSTREAM FROM SCHUYL-KILL R. UND ER MAIN ST.	MIDSTREAM ON SCHUYLKILL R AT FORMER NPDES DISCHG	ONSITE DRAIN AGE DITCH;30 FEET FROM CO NFLU.W/SCH.R	DOWN STREAM SAMPLE FROM SCHUYLKILL RIVER	DUPLICATE OF SW-4 SAME LOCATIO N AS SW-4	CUHWC:SCHUYL KILL RIVER INTAKE. ACR-OSS FROM SIT	AQUEOUS BLANK	UPSTREAM ON SCHULYKILL R UNDER MAIN ST. BRIDGE	MID-STREAM ON SCHUYL.R. AT FORMER NPDES DISCG.	ON-SITE DITC H 30-FT. FRO M CONFLU. W/ SCHUYLKILL R
PH:				6.9	6.7	6.7	6.9		6.8		6.3	6.4	6.5
FIELD MEASUREMENTS:	none>bkg hnu	none>bkg hnu	none>bkg HNU	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
PERCENT SOLIDS:											51.2%	50.4%	60.0%
TYPE OF DATA: ****** INORGANICS **********													
DILUTION FACTOR: : GFAA	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.391	0.397	0.333
: ICP	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.391	0.397	0.333
: Hg	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.977	0.992	0.833
: CN	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.098	0.099	0.083

DET. LIMIT CRQL (*=IDL)	SAMPLE NUMBER: / UNITS:	MCJE02 ug/l	MCJE03 ug/l	MCJE04 ug/l	MCJE05 ug/l	MCJE06 ug/l	MCJE07 ug/l	MCJE08 ug/l	MCJE10 ug/l	MCJE09 ug/l	MCJE24 ug/l	MCJE11 mg/kg	MCJE12 mg/kg	MCJE13 mg/kg
14.00	aluminum	22.90 B	15.10 B	32.50 B	134.00 J	937.00 J	1090.00 J	1560.00 J	286.00 J	119.00 J	15.10	6080.00	8190.00	12400.00
3.00	antimony													
2.00	arsenic	10.80 B	8.10 B	5.80 B	6.80 B	7.20 B	7.20 B	8.90 B	6.40 B	6.70 B	5.40	7.00 B	6.10 B	7.80 B
1200.00	barium	95.50	248.00	284.00	33.00 J	55.60 J	55.30 J	93.90 J	33.80 J	30.30 J		120.00	118.00	146.00
1.00	beryllium							1.10				1.10	1.30	2.20
3.00	cadmium											1.40	1.40	
7000.00	calcium	68700.00	38700.00	48400.00	38000.00	39900.00	14500.00	44100.00	37900.00	33100.00	29.10	10200.00	4070.00	1800.00
3.00	chromium					3.70 J		7.10 J				31.60	31.50	19.30
4.00	cobalt					6.70 J		29.00 J	6.40 J			38.80	32.90	31.00
3.00	copper	5.00	188.00	68.00	5.50 J	23.80 J	5.00 J	55.60 J	7.40 J	4.50 J		74.20	58.30	61.00
6.00	iron	9.40 B	52.50 B	21.90 B	202.00 J	1380.00 J	930.00 J	3470.00 J	547.00 J	132.00 J	12.50	14900.00	17800.00	17500.00
1.00	lead (anal. by GFAA)					19.00 J	1.10 J	59.90 J	2.70 J			113.00 J	62.70	33.30 J
37.00	magnesium	15100.00	15300.00	16800.00	12400.00	12700.00	5790.00	14300.00	12400.00	10800.00	42.60	5420.00	3110.00	2580.00
2.00	manganese			2.70	123.00 J	507.00 J	51.70 J	1210.00 J	379.00 J	113.00 J		1340.00	1230.00	291.00
0.20	mercury											0.29	0.30	0.50
22.00	nickel							32.60				40.30	40.40	55.20
1122.00	potassium	774.00	1000.00	1300.00	3030.00 J	3300.00 J	2270.00 J	3770.00 J	2620.00 J	2780.00 J		629.00	560.00	869.00
2.00	selenium	2.00 B			2.00 B	2.00 B			3.30 B	2.50 B		1.50 B		0.96 B
33.00	sodium	14700.00	21900.00	17700.00	23300.00	22600.00	6150.00	24100.00	22300.00	18800.00		203.00	221.00	80.60
4.00	vanadium							6.40				23.30	22.80	23.20
2.00	zinc	14.40 B	63.30 B	39.50 B	48.50 B	176.00 J	27.70 B	301.00 J	61.40 B	76.00 B	15.60	384.00	288.00	239.00
10.00	cyanide					11.70								

Comments: **********

C= confirmed by GC/MS

D=result reported from diluted re-analys
sample det.limit=dil.factor x IDL

7.2 ORGANIC DATA VALIDATION REPORT: CASE 17744

7.2.1 Overview

Case 17744 consisted of 14 low-level solid samples and 10 low-level aqueous samples submitted to Compuchem Laboratories (COMPU) for volatiles, semivolatiles, and pesticide/polychlorinated biphenyl (PCB) analyses. One field blank and two duplicate pairs were included in this sample set. One trip blank was analyzed for volatile compounds only. The samples were analyzed as a Contract Laboratory Program (CLP) Routine Analytical Service (RAS).

7.2.2 Summary

These samples were analyzed according to the March 1990 Statement of Work (SOW), and the data were fully reviewed using the National Functional Guidelines for Organic Data Review, Multi-Media, Multi-Concentration, February 1988, with Regional Modifications. (Areas examined in detail are included in the Support Documentation appendix to this report.) All samples were successfully analyzed for all target compounds. Detection capability for most analytes was demonstrated by meeting criteria for spike and surrogate recoveries and instrument tuning and calibration. The laboratory performed all analyses in accordance with CLP RAS protocols.

7.2.3 Major Issues

Issues affecting or changing the confidence concerning the presence or absence of analytes and issues related to severe quantitative bias are discussed below.

- All results for methylene chloride, acetone, diethyl phthalate, di-n-butyl phthalate, butylbenzyl phthalate, and bis(2-ethylhexyl) phthalate (DEHP) have been flagged as artifacts of blank contamination (B), except where these compounds were detected in the field blanks, samples CHY24 and CHY25. The results for these common laboratory contaminants were not substantially higher in the samples than in all associated blanks.

- Several single-peak pesticide results have also been flagged (B) because concentrations were within five times the concentrations for corresponding peaks detected in blank analyses. The affected compounds and associated results are as follows:

Compound	Affected Results
heptachlor	CHY12, CHY13, CHY16, CHY19, CHY21, CHY23, and CHY26
endosulfan sulfate	CHY14
methoxychlor	CHY13 and CHY23

- Many pesticide compounds were reported, but, because none were found at levels high enough to allow GC/MS confirmation, the confidence concerning the presence of pesticides depends upon the retention time of each reported compound being unique (i.e., different from any unrelated detectable compound that might happen to be in the sample). Unfortunately, there were so many closely spaced peaks of similar sizes in the chromatograms of solid samples, there is a high probability that unrelated compounds could have eluted at retention times similar to the target pesticides and thereby produced false positives for the reported pesticide compounds. Furthermore, in many cases, there were severe disagreements between the concentrations of a pesticide calculated from injection of the same extract on two different GC columns, which suggests that the larger of the two peaks must be attributable to interferences.

  Therefore, it cannot be determined if any individual target pesticide compound reported in these samples is actually present, versus an artifact attributable to unrelated organic compounds that are not part of the CLP target compound list. All target pesticide results have been flagged (R), unreliable, to indicate that these compounds may or may not be present. Even groups of related pesticide compounds reported together in samples CHY11, CHY12, CHY13, and CHY14 are not considered reliable. [For example, the components of technical-grade chlordane (alpha chlordane, gamma chlordane, heptachlor, and heptachlor epoxide) were reported together, but because there were continuous closely spaced peaks adjacent to these target compounds that were of similar size, technical chlordane constituents were not visible above the random interference pattern that was superimposed over the target compound retention time zones. In addition, several of the identifications of chlordane and DDT analogs exhibited greater than four-fold discrepancies between the concentrations detected on two GC columns.] The Support Documentation attachments contain example chromatograms and comparisons of retention times and concentrations detected on the two GC columns. Further information would be useful to determine whether any of the reported pesticides are actually present.

- The reviewer corrected the quantitation of results for benzo(b)fluoranthene and benzo(k)fluoranthene in all samples where both of these isomers were reported, except CHY17 and CHY22. In these samples, the laboratory identified and reported these isomers as a co-eluting pair and assumed that equal amounts of both isomers were present. The laboratory personnel did not attempt a manual integration of the separate chromatographic peaks in order to obtain more accurate results for the individual isomers. In some cases, the mass-selective chromatogram indicated that only the benzo(b) fluoranthene isomer was present above the laboratory's reporting limit of 1 ng. In samples CHY11, CHY13, CHY15, CHY16, CHY18, and CHY23, the reviewer deleted the results for benzo(k)fluoranthene from the data summary. In samples CHY12, CHY14, CHY19, CHY20, CHY21, and CHY26, the reviewer changed the percentage of area attributed to each isomer. Because the reviewer's recalculations for the areas associated with each isomer are estimates, all results changed by the reviewer should be considered estimated. The Support Documentation appendix contains all chromatograms, quantitation lists for the samples and associated standards, and re-calculations.

- Very low recoveries (less than 10 percent) were reported for the tribromophenol surrogate in sample CHY22. This sample was re-analyzed and exhibited similar recoveries. Detection capability for acid-fraction compounds, in particular multihalogenated compounds such as pentachlorophenol, is considered unreliable for this sample. Because quality control data were similar for base-neutral surrogates, the reviewer reported the higher of the initial and re-analysis results for each base-neutral compound that was not affected by blank contamination and the lower of the two results for compounds within the range affected by blank contamination.

- Very low matrix spike/matrix spike duplicate (MS/MSD) recoveries (two and 10 percent, respectively) were obtained for pentachlorophenol in solid sample CHY18. Corresponding tribromophenol surrogate recoveries in these analyses were 12 and 53 percent, respectively. Therefore, detection capability for pentachlorophenol is considered unreliable in all solid samples.

- The result for benzo(g,h,i)perylene has been flagged as tentative (N) in sample CHY11. The mass spectrum for this compound did not contain all the characteristic ions that are present in the reference standard. The base peak appeared to be obscured by interferences, and the lower intensity half-mass ions were not visible. Because many other polynuclear aromatic compounds are present in this sample, and because this compound was confidently identified in nearly every other sample at this site, this compound should be considered present at this location. Further information may be useful in confirming the presence of this compound at this sampling location.

7.2.4 Minor Issues

Data qualifications related to precision, accuracy, and bias in reported results and quantitation limits are discussed below.

- The recoveries for the acid semivolatile surrogate compounds 2-fluorophenol, tribromophenol, and 2-chlorophenol were low in solid sample CHY16. (The recovery for 2-fluorophenol was below contractual limits.) Detection limits for acid-fraction compounds are considered biased low in this sample.

- The laboratory diluted the semivolatile fractions of samples CHY18 and CHY20 because levels for some target compounds exceeded the calibration range of the instrument. The reviewer reported the highest levels for all compounds that were within the calibration range of the instrument that were not considered artifacts of blank contamination (such as phthalates). For compounds that exhibited instrument levels that were below the calibration range, the results that were closer to the lower limit of the calibration range (10 ng) were reported. For compounds present at levels affected by blank contamination, the lowest of the two results was reported. Note that diethyl phthalate was not reported in sample CHY18 because it was detected only in the diluted analysis.

- The recovery for the tribromophenol surrogate was low for the initial, undiluted analysis of sample CHY18. (This recovery was acceptable for the diluted re-analysis.) The detection limits for multihalogenated phenols (especially pentachlorophenol) are considered biased low for the initial analysis of this sample. However, the elevated detection limits reported from the diluted analysis are considered valid, with the exception of pentachlorophenol, which was previously qualified unreliable.

- Low recoveries for the tribromophenol surrogate were obtained for samples CHY17, CHY19, and CHY20. Detection limits for multihalogenated phenols (especially pentachlorophenol) are considered biased low for these samples.

- Low recoveries were noted for pyrene for the MS/MSD analysis of sample CHY18. Because the recoveries for the other base-neutral compounds were acceptable, and the terphenyl surrogate recoveries were acceptable, it is possible that sample inhomogeneity may have contributed to these low recoveries. A direction of bias cannot be firmly established. All solid results for pyrene have been flagged as estimated (J) and may be either imprecise or biased slightly low.

- The field duplicate samples CHY19 and CHY22 exhibited imprecision in results above the quantitation limit for phenanthrene, fluoranthene, and benzo(a)pyrene. Results for these compounds are considered estimated and have been flagged (J) in all surface soil samples (CHY15 through CHY23 and CHY26).

- A high percent difference between the average initial calibration relative response factor (RRF) and the continuing calibration RRF for benzo(g,h,i)perylene was observed on the day that sample CHY16 was analyzed. The result for this compound should be considered estimated in this sample.

- The laboratory diluted and re-analyzed the pesticide/PCB fraction of samples CHY11, CHY14, and CHY15 because of target compounds that exceeded the calibration range of the instrument. Based on an evaluation of both analyses for each sample, the reviewer reported the highest levels for all compounds that were detected in either analysis that were not rejected because of blank contamination. For sample CHY15, the results for Aroclor 1260 were reported from the diluted analysis because the instrument level result was within the range of the calibration standards for this PCB.

- The extraction for the semivolatile analysis of solid sample CHY16 occurred 19 days after sampling. Detection limits may be biased low for compounds that were not detected, although the degree of bias may be very minor for compounds known to be persistent in the environment [polycyclic aromatic hydrocarbons (PAHs), in particular]. The result for DEHP in this sample was previously flagged due to blank contamination. All other detected compounds were PAHs and were previously flagged (J), estimated, because levels are below the quantitation limit.

7.2.5 Notes

- The laboratory extracts of the pesticide fraction of samples CHY15 and CHY21 were accidentally switched in the initial analyses, as revealed when high levels of PCBs were confirmed by GC/MS in the semivolatile extracts of the opposite sample. A re-extraction of these two samples was performed that confirmed that sample CHY15 contained high levels of PCBs and sample CHY21 contained only a very low level.

- The laboratory did not provide the second page of the semivolatile result form (Ic) for sample CHY02. Raw data indicated which results the laboratory intended to report, so the reviewer has reported the appropriate values on the data summary.

- Although flagged (B), the result for acetone may be real in sample CHY16. The instrument level result was higher than for any other sample, and the presence of 2-butanone (a related ketone that is often present when acetone is present in a sample) may also suggest that acetone may be indigenous to this sampling location. Further information may be useful in verifying if acetone is actually present at this location.

- The reviewer noted the presence of 4-nitrophenol, an unusual compound, in sample CHY07. This compound was confirmed by acceptable spectrum and retention time matching. Although this sample was also chosen for MS/MSD analysis, there was no evidence of any matrix spike compounds (other than 4-nitrophenol) in the unspiked analysis of CHY07.

- The results reported for Aroclor 1260 in samples CHY15 and CHY21 exhibited acceptable peak-pattern matching quality and retention time match for characteristic peaks on both chromatographic columns. In addition, penta- through heptachlorobiphenyls were also identified as tentatively identified compounds (TICs) in sample CHY21; these congeners are the major constituents of Aroclor 1260.

- Because the laboratory did not supply mass-selective chromatograms for sample CHY17, it cannot be determined whether only one compound or both benzo(b)fluoranthene and benzo(k)fluoranthene are present and in what relative quantities each isomer may be present.

- The dilution factor for the pesticide/PCB analyses of aqueous samples CHY04, CHY05, CHY06, CHY08, CHY09, and CHY10 has been entered as 1,000 on the data summary, and the units for these analyses have been entered as nanograms per liter (ng/l). This was done because the results reported by the laboratory were too low to be entered as standard microgram/liter (ug/l) units. It should be noted that these samples were not diluted 1,000 times.

- Sample results that are below the range of accurate quantitation have been flagged as estimated (J) where no other flag exists.

- TICs that are not artifacts of blank contamination are included as an attachment.

- This report has been formatted to address issues directly affecting data usability at the subject site. Support data are included as an attachment. (Issues pertaining to laboratory contractual compliance are addressed in the Regional Data Assessment Forms directed toward the Technical Project Officer.)

Report prepared by (b) (4)
(215) 971-0900 (b) (4)

Report reviewed by (b) (4)
(215) 971-0900 (b) (4)

Case 17744

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION VALUE	ESTIMATED CONCENTRATION UNITS	QUALIFIER CODE	COMPOUND NAME
					* There were no VOA TICs for any sample except CHY16 *
CHY16	VOA	1670	ug/kg	TOT/ISO	C_3-alkyl benzene (C_9H_{12}) (7)
↓	↓	21	↓	ISO	C_4-alkyl benzene, $C_{10}H_{14}$
↓	↓	120	↓	ISO	C_9H_{10}, methyl styrene
CHY02	BNA	5	ug/l		aliphatic alcohol
"	"	8		TOT	Sat'd HC (3)
CHY03	BNA				ND
CHY04	BNA				ND
CHY05	BNA	3	ug/l	UNK	poss. Nitrogen subst. aromatic
CHY06	BNA				ND
CHY07	BNA				ND
CHY08	BNA				ND
CHY09	BNA				ND
CHY10	BNA				ND

DEFINITIONS OF QUALIFIER CODES:

SUS = SUSPECTED FALSE POSITIVE RESULT: Compound is either a common laboratory contaminant, or else a possible reaction byproduct (artifact) attributable to the chemical reagents used for sample preparation and analysis. This result is suspect even though this compound was not found in any associated blanks.

UNK = UNKNOWN COMPOUND: Library search result unreasonable or of very low matching quality.

TOT = TOTAL CONCENTRATION REPORTED: Represents the sum of several compounds detected all belonging to the same chemical class.

ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

SAT HC = SATURATED HYDROCARBON
UNSAT HC = UNSATURATED HYDROCABON
HC = HYDROCARBON
PAH = polynuclear aromatic hydrocarbon
SUB = SUBSTITUTED
MIX = MIXTURE OF 2 OR MORE COELUTANTS
ND = NONE DETECTED

Case 17744

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION VALUE	ESTIMATED CONCENTRATION UNITS	QUALIFIER CODE	COMPOUND NAME
CH411	BNA	650	ug/kg	ISO	$C_{16}H_{10}$ PAH, such as cyclopentaphenanthrene
		3000		TOT(ISO)	$C_{17}H_{12}$ PAH, such as methyl pyrene (3)
$\Sigma_{PAH} = 6890$		920		ISO	$C_{19}H_{14}$ PAH, such as methyl chrysene
		2300		ISO	$C_{22}H_{12}$ PAH, such as benzo(e) pyrene
		4100		TOT	sat'd HC (3)
CH412	BNA	380	ug/kg	ISO	Methylbenzene sulfonamide - C_7H_9NS, CAS# 70-55-3
		1600		TOT	Carboxylic acid (3)
		5040		TOT	Sat'd HC (6)
		220		UNK	Unsat'd HC of unknown subst.
		730			aromatic amide
		660			aldehyde, such as octadecanal
		2200		UNK	possible sterol derivative
CH413	BNA	460	ug/kg	TOT	aliphatic alcohols (2)
		670		TOT	carboxylic acids (2)
		520			Sat'd HC
		1300		TOT/UNK	Unknowns (2)
CH414	BNA	150	ug/kg		Benzaldehyde
		450			Carboxylic acid
		2000		TOT/UNK	unsat'd HC of unknown subst. (2)
		4200		TOT	Sat'd HC (3)
		13,000			aliphatic alcohol
		600		ISO	$C_{22}H_{12}$ PAH - benzo(e) pyrene
		9000		TOT/UNK	Unknowns (4)
		3400		UNK	possible sterol

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ISO = OR ISOMER: Compound identification is not selective for this isomer only. This result may instead represent the presence of a similar compound comprised of the same atoms bonded together in a different arrangement or substitution pattern.

SAT HC = SATURATED HYDROCARBON
UNSAT HC = UNSATURATED HYDROCABON
HC = HYDROCARBON
PAH = polynuclear aromatic hydrocarbon
SUB = SUBSTITUTED
MIX = MIXTURE OF 2 OR MORE COELUTANTS
ND = NONE DETECTED

case 17744

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION VALUE	ESTIMATED CONCENTRATION UNITS	QUALIFIER CODE	COMPOUND NAME
CHY15	BNA	44,000	ug/kg	TOT	pentachlorobiphenyl (2)
		315,000		TOT	hexachlorobiphenyl (5)
		200,000		TOT	heptachlorobiphenyl (5)
		23,000		ISO	C$_{16}$-dimethyl(methylethyl)naphthalene
		43,000		TOT/ISO	decahydro dimethyl octyl naphthalene (2)
		130,000		TOT/Unk	Unknowns (4)
		50,000		Unk	Unknown aromatic HC
CHY16	BNA	1.9×10^6	ug/kg	TOT	SAT'D HC (19)
"	"	82,000	"		cyclic HC - $C_{17}H_{34}$ (alkyl cyclohexane)
CHY17	BNA	1100	ug/kg	ISO	benzothiazole, C_7H_5NS, CAS# 95-16-9
		510		ISO	Methylthiobenzothiazole (or) CAS# 615-22-5
		1740		TOT	Mercaptobenzothiazole, $C_7H_5NS_2$, CAS# 149-30-4 (2)
		340		Unk	Nitrogen/sulfur subst. aromatic HC
		420		Unk	poss. Nitrogen subst. aromatic HC
		850		ISO	$C_{20}H_{12}$ PAH, such as benzo(e)pyrene
		4200		TOT/Unk	unknowns (7)
CHY18	BNA	370	ug/kg		carboxylic acid
		180		ISO	cyclopentaphenanthrene
		270		ISO	anthracenedione
		2500		ISO	$C_{20}H_{12}$ PAH, such as benzo(e)pyrene
		18,000		TOT	Sat'd HC (3)

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Case 17744

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION VALUE	UNITS	QUALIFIER CODE	COMPOUND NAME
CH419	BNA	350	ug/kg	ISO	cyclopenta phenanthrene
↓	↓	350	↓	ISO	anthracenedione
		1300		ISO	$C_{20}H_{12}$ PAH, such as benz(e)pyrene
↓	↓	4000	↓	TOT/unk	Unknowns (7)
CH420	BNA	23,000	ug/kg	ISO	$C_{10}H_6O_3$ - hydroxynaphthalenedione
		12,000	↓	ISO	$C_{15}H_{10}$ - cyclopentaphenanthrene
		4500		ISO	$C_{15}H_{12}$ PAH - such as Methylanthracene
		7600		ISO	$C_{16}H_{10}O$ - benzonaphthofuran
		45,000		TOT/ISO	$C_{17}H_{12}$ PAH such as Methyl pyrene (4)
		16,000		TOT/ISO	$C_{17}H_{14}$ PAH such as phenylmethylnaphthalene (2)
		18,000		ISO/TOT	$C_{17}H_{10}O$ - benzanthracenone (2)
		12000		ISO	$C_{16}H_{10}S$ - benzonaphthothiophene
		25,000		TOT/ISO	$C_{18}H_{12}$ PAH such as benz(c)phenanthrene (2)
		9800		ISO	$C_{16}H_{11}N$ - benzocarbazole
		23,000		TOT/ISO	$C_{19}H_{14}$ PAH such as Methylchrysene (2)
		26,000		TOT/ISO	$C_{20}H_{12}$ PAH such as benz(e)pyrene (2)
		17,000		Unk	mix of PAHs; m.w. 240, 246
		7600			aliphatic alcohol
↓	↓	14,000	↓	TOT/unk	Unknowns (2)
CH421	BNA	500	ug/kg	ISO	$C_{15}H_{10}$ - cyclopenta phenanthrene
		6300	↓	TOT/ISO	$C_{20}H_{12}$ PAH - such as benz(e)pyrene (2)
↓	↓	17,000	↓	TOT	UNKNOWNS (17)

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Case 17744

SAMPLE DATA SUMMARY: ORGANIC TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NUMBER	ANALYSIS FRACTION (VOA/BNA)	ESTIMATED CONCENTRATION VALUE	ESTIMATED CONCENTRATION UNITS	QUALIFIER CODE	COMPOUND NAME
CH422	BNA	1470	ug/kg	TOT	Sat'd HC (3)
		160		ISO	$C_{18}H_{10}$ - cyclopentaphenanthrene
		82		ISO	$C_{14}H_8O_2$ - anthracenedione
		240		TOT/ISO	$C_{17}H_{12}$ PAH such as methylpyrene (2)
		910		ISO	$C_{20}H_{12}$ PAH such as benzo(e)pyrene
CH423	BNA	290	ug/kg	TOT/Unk	Unsat'd HC (unknown subst (2)
		130			alkene
		340			carboxylic acid
		930			Sat'd HC
		4000		TOT/Unk	Unknowns (4)
CH426	BNA	190	ug/kg		carboxylic acid
		4700		TOT/Unk	possible aromatic HCs (3)
		240			Sat'd HC
		440		Unk	possible subst. cycloalkane
		240		Unk	Unsatd HC (unknown subst.
		3200		TOT/Unk	unknowns (7)

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7.3 INORGANIC DATA VALIDATION REPORT: CASE NUMBER 17744

7.3.1 Overview

The set of samples for Case 17744 contained 10 unfiltered aqueous samples and 14 solid samples that were analyzed through the CLP RAS by Keystone Engineering (KEYTX). Included in the sample set were an unfiltered field blank, an unfiltered field duplicate pair, and a solid field duplicate pair.

7.3.2 Summary

All analytes were successfully analyzed in all samples. Areas of concern with respect to data usability are listed according to the seriousness of the problem. These include the following items:

7.3.3 Major Issues

Issues affecting or changing the confidence concerning the presence or absence of analytes and issues related to severe quantitative bias are discussed below.

- The calibration blanks contained calcium and selenium at levels equal to or greater than the instrument detection limit (IDL). The solid preparation blank contained selenium at a level above the IDL, and the aqueous field blank contained aluminum, arsenic, calcium, iron, magnesium, and zinc at levels above the IDLs. The reported results for these analytes in the affected samples that are less than five times the highest blank concentration have been flagged (B) and may be artifacts of blank contamination (i.e., false positives).

- Results for selenium in samples MCJE02 and MCJE18 and lead in samples MCJE12 through MCJE15, MCJE17, and MCJE18 have been corrected by the reviewer. The laboratory miscalculated or misreported the affected results.

7.3.4 Minor Issues

Data qualifications related to precision, accuracy, and bias in reported results and detection limits are discussed below.

- The inductively coupled plasma (ICP) serial dilution results for aluminum and iron exceeded the 10 percent control limit in aqueous sample MCJE07. Therefore, all reported results for these elements in similar samples have been qualified as estimated (J), except the field blank.

- A low correlation coefficient for arsenic occurred for the method of standard addition (MSA) analysis of one sample. The result is considered estimated (J) because a low correlation coefficient suggests a lack of linearity for the analytical curve generated by this method.

- Significant imprecision was noted between furnace and plasma results for lead in five solid samples. Because the laboratory satisfactorily performed all the required quality assurance/quality control (QA/QC) for the plasma analysis of lead, two valid sets of data are present for all solid samples. The lead results in the affected samples have been qualified as estimated (J); sample inhomogeneity may be responsible for the observed differences. Good agreement was noted between the two methods for the remainder of the solid samples and for aqueous sample MCJE08.

- Field duplicate imprecision for aluminum, barium, cobalt, copper, iron, lead, manganese, potassium, and zinc was noted between surface water samples MCJE08 and MCJE10. Therefore, results for these analytes should be considered estimated in all similar samples and have been qualified as (J). It is possible that a higher level of suspended particulate matter was present in the aliquot taken for digestion of sample MCJE08 than in the aliquot taken for sample MCJE10; this could explain why higher levels occurred for most analytes in MCJE08.

- Field duplicate imprecision also occurred for copper between solid samples MCJE19 and MCJE22. Therefore, results for this analyte should be considered estimated (J) in all similar surface soil samples.

7.3.5 Notes

- Good agreement between plasma and furnace was noted for arsenic in sample MCJE15. The instrument level was above 1,500 ug/l.

- Post-digestion spike (PDS) recoveries were low for selenium analyses in samples MCJE17, MCJE20, and MCJE22. This would suggest that the results for the affected samples may be biased low; however, all three results have been previously qualified because of blank contamination.

- The data were reviewed in accordance with the National Functional Guidelines for Evaluating Inorganic Analyses, with Region III Modifications.

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TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY
AFTER DATA VALIDATION

ANALYTE	SAMPLES AFFECTED	POSITIVE VALUES	BIAS	COMMENTS*
Al	MCJ302, MCJE03, and MCJE04	B	high	(A) (15.1 ug/l)
As	MCJE02 through MCJE14, MCJE17 through MCJE19, MCJE23, and MCJE26	B	high	(A) (5.4 ug/l)
Fe	MCJE02 through MCJE04	B	high	(A) (12.5 ug/l)
Se	all positive results	B	high	(A) (2.7 ug/l)
Zn	MCJE02 through MCJE05, MCJE07, MCJE09, and MCJE10	B	high	(A) (15.8 ug/l)
Al	MCJE05 through MCJE10	J	---	(B) (24.5 percent)
Fe	MCJE05 through MCJE10	J	---	(B) (17.5 percent)
As	MCJE16	J	---	(C) (0.7442)
Al	MCJE05 through MCJE10	J		(D) (142 percent)
Ba	MCJE05 through MCJE10	J		(D) (94 percent)
Co	MCJE05 through MCJE10	J		(D) (128 percent)
Cu	MCJE05 through MCJE10	J		(D) (153 percent)
Fe	MCJE05 through MCJE10	J		(D) (146 percent)
Pb	MCJE05 through MCJE10	J		(D) (183 percent)
Cu	MCJE15 through MCJE23 and MCJE26	J		(D) (82 percent)
Mn	MCJE05 through MCJE10	J		(D) (105 percent)
K	MCJE05 through MCJE10	J		(D) (36 percent)
Zn	MCJE05 through MCJE10	J		(D) (132 percent)
Pb	MCJE11, MCJE13, MCJE22, MCJE23, and MCJE26	J		(E) (68, 74, 99, 66, and 113 percent)

*Comments are defined in table 1B.

TABLE 1B
CODES USED IN COMMENTS COLUMN

A = The blanks contained a result for this analyte that was greater than the IDL. (The highest blank value is in parentheses.) The reported results were less than five times this blank value and may be biased high.

B = The ICP serial dilution result was outside the control limits. (The percent difference between the initial and diluted result is in parentheses.) The reported results are estimated.

C = Because of a low correlation coefficient (the coefficient is in parentheses), the positive result be should be considered estimated.

D = Field duplicate imprecision occurred for this analyte (the relative percent difference is in parentheses). The reported results are considered estimated.

E = Imprecision between the graphite furnace and plasma values occurred for lead in this sample (the relative percent differences between these results for each sample are in parentheses, respectively). The result is considered estimated.

SECTION 8.0

8.0 TOXICOLOGICAL EVALUATION

8.1 SUMMARY

Metals were detected at notable concentrations in soil from the transformer area, the drums west of the distillery, and the trash dump area. It could be prudent to avoid contact with the high-level lead and arsenic concentrations because neither noncarcinogenic nor carcinogenic risks can be ruled out. Polychlorinated biphenyls (PCBs) were detected above recommended guidelines in the soil sample taken from the base of the transformer; mainly because of carcinogenic risk, it could be prudent to avoid contact with this soil. It may be prudent to avoid prolonged contact with the soil from the southeastern edge of the trash dump because of notable polycyclic aromatic hydrocarbon (PAH) concentrations, although adverse effects are not necessarily indicated. PAHs can also pose some increased cancer risk. Reported concentrations of 1,2,4-trichlorobenzene (1,2,4-TCB), toluene, ethylbenzene, xylenes, ketones, cyanide, cadmium, and antimony in soil are not expected to pose significant hazards.

Cadmium, phenol, 1,1,1-trichloroethane (1,1,1-TCEA), 4-methylphenol (4-MP), and PAHs were detected in river sediment at concentrations not expected to pose significant noncarcinogenic direct-contact hazards. The potential for bioconcentration of sediment cadmium by aquatic organisms could not be ruled out.

4-Nitrophenol (4-NP) was detected in drainage ditch water at a concentration not expected to pose a significant environmental or human health threat. Copper, iron, lead, zinc, and cyanide were detected in the river above Ambient Water Quality Criteria (AWQCs); potential effects on sensitive aquatic organisms cannot be ruled out. Metals in the sample taken from the river at a drinking water intake were below health-based criteria and are not expected to pose a significant hazard. Metals in the river water are not expected to pose a significant noncarcinogenic health threat to swimmers. A theoretical increase in overall cancer risk due to lead and beryllium in river water cannot be ruled out.

Xylenes were detected in the public supply well far below drinking water criteria; no adverse effects are indicated. Sodium was detected in one home well above a concentration recommended to minimize sodium intake; adverse effects on the general population are not indicated.

8.2 SUPPORT DOCUMENTATION

8.2.1 Organics

PCBs were confidently and tentatively detected in soil from the base of the transformer. The confidently detected result was reported at 300,000 ug/kg. PCBs were also detected in soil south of the trash dump area at 460 ug/kg. PCBs were at one time used in transformers because they are stable, thermoplastic, and nonflammable.[1] PCBs are also extremely persistent and stable in the environment and can bioconcentrate in the food chain.[1] EPA has recommended guidelines of 25,000 ug/kg for industrial or restricted access areas and 10,000 ug/kg for residential or unlimited access areas.[2] Recently, a protective quantifiable concentration of 1,000 ug/kg has been recommended for residential areas.[3] The reported concentration at the on-site "hot spot" exceeds all recommended guidelines.

Prolonged contact with high concentrations of PCBs can be associated with chloracne and liver damage.[1] However, nonoccupational human toxicity due to PCBs has not been reported for people in the United States.[4] The main concern for human exposure to PCBs is the classification of these compounds as Group B2 (probable human) carcinogens. For a 15-kilogram child incidentally ingesting 200 mg of this soil 350 days per year for six years (an extremely conservative scenario), the estimated excess upper-bound cancer risk would be approximately 2E-3.[5] For a 70-kilogram adult (100 mg soil per day for 30 years), the risk would be approximately 1E-3.[5] Because any contact with carcinogens can theoretically increase overall cancer risk, it would be prudent to avoid contact with this soil.

PAHs were confidently and tentatively identified in soil and sediment throughout the site, as well as in background soil. PAHs are common environmental contaminants because they occur in coal, tar, and the products of the combustion of organic material.[6] Coal tar, which is rich in PAHs, was once used for the extraction of dye compounds such as benzene, toluene, naphthalene, phenol, and carbazole.[7] These compounds, as well as other compounds associated with dye synthesis, were found on and near the site. Dye synthesis is not known to have occurred on site. The plastics industry is reported to be an important market for dyes; plastics manufacturing may have occurred on site (see section 1.3).[7] PAHs can also be naturally occurring up to as much as approximately 10,000 ug/kg.[8] At this site, PAHs were confidently detected up to 62,400 ug/kg in on-site soil, with a much higher concentration of 406,190 ug/kg at sample S-6 (southeastern edge of trash dump), compared to 758 ug/kg in background soil. Sample S-6 was described as containing large amounts of organic material (see sample log).

PAHs have been associated with skin irritation at high concentrations.[1] Although such effects are not necessarily indicated from reported concentrations, it may be prudent to avoid prolonged contact with the highest-concentration soil. Even if a 15-kilogram child were exposed daily to 200 mg of the most contaminated soil or sediment, significant noncarcinogenic effects would not be indicated due to these PAHs, separately or together, based on a comparison between estimated intakes and available risk reference doses (RfDs) [total Hazard Quotient (HQ) (ratio of intake to RfD), 0.07].[5,9] Estimated total cancer risks from PAHs in on-site soil ingested at this rate would be up to approximately 4E-4, using worst-case (maximum) concentrations for each PAH.[5,9,10] This can be compared to the cancer risk of 6E-7, which could be estimated for background soil.[5,9,10] The maximum estimated oral cancer risk for sediment using the same exposure scenario would be approximately 2E-5.

An examination of the pattern of sediment contamination reveals that concentrations of total PAHs were lowest in the drainage ditch and downstream samples and highest in the upstream sample. In spite of their lipophilicity, PAHs tend to be metabolized by many aquatic organisms, reducing bioconcentration potential and secondary exposure to fish consumers, if any.[11]

1,2,4-TCB was detected in one on-site soil sample at 2,300 ug/kg. The 1,2,4-TCB, which can be used as a dielectric fluid in transformers, was detected in the sample obtained at the base of the transformer.[1] 1,2,4-TCB can cause skin irritation, neurological effects, and liver damage at high (such as occupational industrial) exposures.[1] Comparing a conservative estimate of 1,2,4-TCB intake from exposure to this soil (15-kilogram child ingesting 200 mg soil 350 days per year for six years) to the RfD, it can be seen that adverse noncarcinogenic effects would not be anticipated (HQ = 0.003).[9]

Toluene (120 ug/kg), ethylbenzene (100 ug/kg), and xylenes (690 ug/kg) were detected in one soil sample (S-2, at the drums west of the distillery). These compounds are volatile solvents that can be irritants and neurotoxicants at high concentrations.[1] They tend to be associated with fuels or paints and are fairly mobile in the environment.[1] Xylenes and ethylbenzene can also be used in the manufacture of plastics, and toluene can be a component of dyeing wastes.[12] Comparison between conservatively estimated intakes and the RfDs reveals that noncarcinogenic impacts are not indicated for these compounds, separately or together (HQs for toluene, ethylbenzene, and xylenes are 8E-6, 1E-5, and 4E-6, respectively).[5]

Two ketones were also detected in the soil sample taken from the drum area west of the distillery: 2-butanone (160 ug/kg) and 4-methyl-2-pentanone (340 ug/kg). These ketones are solvents that can have irritant effects.[1] However, comparison of conservatively estimated intakes to the RfDs indicates that these compounds would not be expected to pose a significant noncarcinogenic hazard, separately or together (HQs of 2-butanone and 4-methyl-2-pentanone are 4E-5 and 8E-5, respectively).[5,9]

Phenol (75 ug/kg) and 4-MP (95 ug/kg) were detected in midstream river sediment. Phenol is a strong irritant that can be used as a disinfectant at low concentrations.[1] It is a potential component of dyeing wastes.[12] 4-MP is a disinfectant that can be used in the manufacture of chemicals, dyes, and plastics.[1] 4-MP is also an irritant.[1] Comparison of conservatively estimated intakes to the RfDs indicates that these compounds would not be expected to pose a significant noncarcinogenic direct contact hazard, individually or together (HQs of phenol and 4-MP are 1.6E-6 and 2.4E-5, respectively).[9] These compounds are generally not very persistent in the aquatic environment, and biodegradation is usually significant.[11,13]

1,1,1-TCEA was detected in upstream river sediment at 3 ug/kg. This solvent can affect the skin, cardiovascular system, and nervous system at high levels.[1] However, at the reported trace concentration, no significant impacts are indicated.[5,9] This compound is not very persistent in the aquatic environment.[11,13]

4-NP was detected in drainage ditch surface water at approximately 1 ug/l, well below the chronic fresh-water Lowest Observed Effects Level (LOEL) of 150 ug/l for nitrophenols.[14] Nitrophenols are used in pesticide and dye synthesis.[1] 4-NP is reported to affect aquatic organisms at concentrations exceeding 4,000 ug/l.[13] The 4-NP concentration is also well below the level that would be of concern for human ingestion of the water, using an RfD of 6.2E-2 mg/kg/day and assuming one liter per day consumption by a 15-kilogram child (HQ = 7E-5).[15]

Xylenes were detected in the PSW-1 sample at approximately 1 ug/l. The properties of xylenes were discussed previously. The PSW-1 concentration is well below the enforceable Maximum Contaminant Level (MCL) and purely health-based MCL Goal (MCLG) of 10,000 ug/l.[16] No adverse effects are indicated for this trace concentration of xylenes.

An aliphatic alcohol (approximately 5 ug/l) and saturated hydrocarbons (approximately 8 ug/l) were also tentatively identified in PSW-1. The alcohols are generally solvents that can be irritants at high concentrations.[17] The saturated hydrocarbons could include solvents, plant constituents, etc. No specific toxicological assessment of unknown compounds can be made.

Methylbenzene sulfonamide, a fungicide, was tentatively identified in the midstream sediment sample. Few data are available for this compound. However, an oral wild bird LD50 (dose lethal to 50 percent of an experimental population) of 75 mg/kg has been reported.[18] In soil sample S-3 (taken from the tank farm), other sulfur-containing compounds such as benzothiazole and nitrogen-containing compounds were tentatively identified. Benzothiazole has an oral mouse LD50 of 900 mg/kg.[18] Sulfur- and nitrogen-containing compounds are widely used in dye synthesis.[7,19]

8.2.2 Inorganics

Metals were detected at notable concentrations in four soil samples: S-1 (at the base of the transformer), S-2 (at the drums outside the shed west of the distillery), S-6 (at the southeastern edge of the trash dump), and S-7 (south of the drums near the trash dump).

Lead was detected up to 358 mg/kg in soil samples (excluding S-2). Lead has been known to affect the hematopoietic, renal, and nervous systems and is classified as a Group B2 carcinogen.[9,18] Children, because of their high absorption rate and developing nervous systems, are especially vulnerable.[6] These soil lead concentrations are below a recommended clean-up guideline of 500 to 1,000 mg/kg.[20] Lead binds strongly to soil, decreasing its availability. Significant impacts are not necessarily expected for these concentrations of lead in soil, although it is generally desirable to minimize all lead exposure. Lead was detected at 4,810 mg/kg in soil sample S-2. Inadvertent ingestion of 200 mg soil would result in a lead intake of 962 ug. Daily lead intake from food, air, and dust is reported to range from 60.2 (rural nonsmoker) to 118.2 (urban smoker) ug/day for adults and from 46.6 (rural) to 137.6 (urban) ug/day for children.[21] Chronic exposure could be undesirable, as increases in blood lead have been reported from chronic lead exposure (35 days or longer).[22] Effects from increased blood lead range from enzyme inhibition through anemia and encephalopathy in extreme cases.[6] It would be prudent to avoid prolonged contact with the apparent "hot spot" at S-2, especially for children.

Arsenic was detected in on-site soil up to 372 mg/kg; the highest concentration was detected at sample S-1. Arsenic has been used in pesticides, pharmaceuticals manufacturing, glass, textiles, and metal alloys.[1] Arsenic is noted for skin toxicity and gastrointestinal and neurological symptoms.[1] The concentrations in soil samples S-1, S-2, and S-7 would result in an HQ greater than 1.0, assuming frequent direct contact (incidental ingestion of 200 mg soil by a 15-kilogram child).[9] Therefore, it would be prudent to avoid direct contact with soils from these areas, although arsenic is generally strongly bound to soil and the scenario is extremely conservative in assuming 100 percent absorption. Arsenic is also classified as a Group A (human) oral carcinogen.[5] Using the oral cancer slope factor (CSF) for arsenic of 1.75 per mg/kg/day and the above conservative scenario (also assuming exposure duration of six years and the very conservative exposure frequency of 350 days per year), an upper-bound cancer risk of approximately 7E-4 can be estimated for children if they were in almost daily contact with the highest-level soil sample.[5] For adults (same scenario, but assuming 100 mg soil per day, 70-kilogram body weight, and 30 years exposure duration), the HQ for the highest-level arsenic only would exceed 1.0; the estimated cancer risk would be approximately 4E-4. Because of the high CSF for arsenic, it would be prudent to avoid contact with the highest-level soils and is generally desirable to minimize contact with arsenic. However, arsenic, like lead, is a naturally occurring element for which it is virtually impossible to attain zero exposure.

Cyanide was detected in soil at the base of the transformer and at the drums west of the distillery up to 1.8 mg/kg. Cyanides can be used in electroplating and other industries.[1] At high concentrations (e.g., occupational), cyanides can cause nausea, skin irritation, and eventually interfere with the ability of red blood cells to release oxygen to tissues (its fatal mechanism).[1] However, cyanide is not generally considered to be a major environmental problem because of its lack of persistence; it is readily metabolized at low concentrations.[23] Based on the conservative estimated intake for children, an oral HQ of 1E-3 can be calculated.[5,9] Significant noncarcinogenic impacts due to cyanide are not expected for this type of contact with soil.

Antimony was detected at a notable concentration (11 mg/kg) in S-7. Antimony is used in metal alloys, plasticizers, paints and glazes, and ammunition and explosives.[1] It can cause skin irritation and gastrointestinal effects at high concentrations.[1] Using the conservative scenario for child soil exposure, the reported concentration of antimony is not expected to pose a significant noncarcinogenic hazard (HQ = 0.3).[5]

Cadmium was detected up to 2.6 mg/kg in on-site soil and up to 2.2 mg/kg in sediment from the Schuylkill River (cadmium was detected upstream, midstream, and downstream of the site, but was not detected in the on-site drainage ditch). Cadmium is a common environmental contaminant that can cause toxicity to the kidneys, prostate, and blood after high-level industrial exposure.[1] The reported cadmium concentrations would not be expected to pose a significant noncarcinogenic hazard (HQ up to 0.07, using the conservative child exposure scenario).[5] Cadmium tends to bind strongly to sediment and was not detected in the surface water. Bioconcentration of cadmium can be significant for certain freshwater species, including caddisflies, brook trout, and mosquitofish [reported bioconcentration factors (BCFs) range from 2 to 4,190].[24] The reported cadmium concentrations in fish and shellfish used as food in a typical diet range from 0.1 to 1 mg/kg.[6]

Notable concentrations of metals were not reported for soil sample S-9, where stressed vegetation was observed.

The close proximity of state game lands introduces the possibility that ecological receptors may be exposed to on-site metals. Potential receptors include deer, opossum, squirrels, rabbits, and mice. Most of these animals would be expected to venture only rarely onto the most contaminated areas of the site, because of the lack of cover from trees and the presence of houses and roads in the northern area. Because of the proximity of the river, animals such as ducks, geese, and gulls may be present; however, these birds are expected to spend more time in and very near the water. Both lead and arsenic have been reported to affect rodents, large mammals such as cattle, and fowl at sufficient concentrations.[25] In fowl, the effects of arsenic toxicity include inflammation of the gizzard and liver, and the effects of lead toxicity include gastrointestinal effects and neuropathy.[25] Gastrointestinal effects and neurotoxicity are reported in larger animals for both metals.[25] With the information available at this stage of site investigations, it is difficult (and beyond the current scope) to estimate effects on such animals or their consumers, but a slight possibility of exposure to these animals cannot be ruled out.

Metals were also detected at notable concentrations in surface water samples obtained from the Schuylkill River and the drainage ditch. Aluminum was detected in all samples, ranging from 119 ug/l (at the CUHWC intake) to up to 1,560 ug/l (downstream Schuylkill River), in excess of the AWQC of 87 ug/l.[26] For other metals, the only exceedances of AWQCs occurred in the midstream and downstream river samples: copper (23.8 ug/l midstream, 55.6 ug/l downstream; AWQC: 12 ug/l), iron (1,380 ug/l midstream, 3,470 ug/l downstream; AWQC: 1,000 ug/l), lead (19 ug/l midstream, 59.9 ug/l downstream; AWQC: 3.2 ug/l), zinc (176 ug/l midstream, 301 ug/l downstream; AWQC: 110 ug/l), and cyanide (11.7 ug/l midstream; AWQC: 5.2 ug/l).[14] Where AWQCs are exceeded, potential effects on sensitive aquatic species cannot be ruled out. Lead is especially undesirable in an aquatic environment because of its tendency to bioconcentrate (reported BCFs range from approximately 40 in vertebrate fish to 1,700 in a snail).[27] Potential effects on fish consumers, if any, cannot be specifically assessed without fish-tissue analysis.

Because the river is ultimately used for drinking water purposes at the CUHWC intake, it is possible to examine this sample (SW-5) for pretreatment metals. In this sample, the only metals that exceeded drinking water criteria were aluminum (119 ug/l) and manganese (113 ug/l), which exceeded the non-health-based aesthetic Secondary MCLs (SMCLs) of 50 ug/l.[28] The metals in this sample would not be expected to produce adverse health effects on the general population, even if the water were consumed in this condition.

It is also possible to examine the surface water results with regard to recreational use, such as swimming. The most conservative approach includes comparison of the samples with drinking water criteria or RfDs. SMCLs were not considered, but the health-based RfDs for chemicals such as aluminum, iron, and manganese were considered. Even if the river water were consumed at the rate of one liter per day by a 15-kilogram child, neither the individual HQs nor the total Hazard Index (HI) (sum of HQs) would exceed 1.0.[5,9] In actuality, the estimated intake of water is much less, about 0.05 liter per hour of swimming.[28] For chemicals with drinking water criteria, the proposed MCL of 1 ug/l was exceeded by beryllium in SW-4 (1.1 ug/l), and the Action Level of 15 ug/l was exceeded by lead in SW-2 (19 ug/l) and SW-4 (59.9 ug/l).[29,30,31,32] For these metals, carcinogenicity is a potential risk of concern because both are classified as Group B2 carcinogens. No EPA consensus for an oral CSF has been established for lead. For beryllium at this concentration, a 70-kilogram adult swimming seven days per year, two hours per day, for 30 years, ingesting 0.05 liter per hour, an increased oral cancer risk of approximately 6E-8 can be estimated.[5] Therefore, it can be stated that potential risks to swimmers in the river are due to the carcinogenicity of lead and beryllium; according to the no-threshold theory of carcinogenicity, any contact with carcinogens can increase overall cancer risk.

Sodium was detected in water from HW-1 at 21,900 ug/l, exceeding a guideline recommended by the American Heart Association (20,000 ug/l) to reduce the contribution of drinking water to total sodium intake.[33] While this can be important for persons on sodium-restricted diets, adverse health effects are not expected for the general population.

Report prepared by (b) (4) (b) (4), Toxicologist

Report reviewed by (b) (4) (b) (4), DABT, Senior Toxicologist

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APPENDIX A

PROJECT NAME: Lindfield Industrial Park EPA SITE NO.: 2598
Proj. NO.: 326309 REGION: 3

SUPPORT DOCUMENTATION FOR THE REVIEW OF ORGANIC ANALYSIS LAB DATA PACKAGE

CASE/SAS NO.: 17744
TYPE OF ANALYSIS: Low organic
CONTRACT LABORATORY: 4 compan
APPLICABLE IFB OR SOW: 3190
REVIEWER: (b) (4)
REVIEW DATE: May 1992

APPLICABLE SAMPLE NO's.: Chy[redacted]-26

THE FOLLOWING TABLE INDICATES AREAS WHICH WERE EXAMINED IN DETAIL, THE IDENTIFIED PROBLEM AREAS, AND SUPPORT DOCUMENTATION ATTACHMENTS:

	AREAS EXAMINED IN DETAIL (CHECK (✓) IF YES OR FOOTNOTE LETTER FOR COMMENTS BELOW)				PROBLEM AREAS IDENTIFIED (CHECK (✓) IF YES OR FOOTNOTE NUMBER FOR COMMENTS BELOW)				SUPPORT DOCUMENTATION ATTACHMENTS (CHECK (✓) IF YES OR IDENTIFY ATTACHMENT NO.)			
	ALL APPLICABLE ANALYSES	VOA	BNA	PEST/PCB	ALL APPLICABLE ANALYSES	VOA	BNA	PEST/PCB	ALL APPLICABLE ANALYSES	VOA	BNA	PEST/PCB
HOLDING TIMES	✓											
BLANK ANALYSIS RESULTS: TARGET COMPOUNDS	✓				✓				✓			
BLANK ANALYSIS RESULTS: TENTATIVE I.D.s	✓				✓				✓			
SURROGATE SPIKE RESULTS	✓				✓				✓			
MATRIX SPIKE RESULTS	✓				✓				✓			
DUPLICATE ANALYSIS RESULTS	✓											
TARGET COMPOUND MATCHING QUALITY	✓											
TENTATIVELY IDENTIFIED COMPOUNDS	✓											
DFTPP & BFB SPECTRUM TUNE RESULTS	✓											
GC INSTRUMENT PERFORMANCE	✓											
INITIAL CALIBRATIONS	✓											
CONTINUING CALIBRATIONS	✓											
QUANTITATION OF RESULTS	✓											
OTHERS	✓											

COMMENTS:

19744

BLANK ANALYSIS RESULTS FOR TARGET COMPOUNDS

FRACTION	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT)
VOA	low aq lab blk			VBlkZB	lab	43 MeCl2 16.5 ug/l (1) 37 acetone 3.7 ug/l (2)
	↓			VBlkAJ		439 MeCl2 8.2 ug/l (1) 377 acetone 2.5 ug/l (2)
				VBlkDC		437 MeCl2 5.8 ug/l (1) 37 acetone 15.3 ug/l (2) 672 2-butanone 3.3 ug/l (2)
	low soild lab blk			VBlkT7		421 MeCl2 27.5 ug/l 374 acetone 20.3 ug/l
				VBlkK8		423 MeCl2 39.0 ug/l (2) 377 acetone 15.6 ug/l (2)
				VBlkW9		442 MeCl2 13.5 ug/l (1) 353 acetone 19.2 ug/l (1)
	↓			VBlkA4		422 MeCl2 25.6 ug/l (1) 376 acetone 27.1 ug/l (1)
	low aq field blk			CHy24	HNUS	436 MeCl2 16.5 ug/l (1) 374 acetone 6.7 ug/l (2)
↓	low aq trip blk			CHy25	HNUS	437 MeCl2 14.7 ug/l (1) 373 acetone 7.5 ug/l (2)
BNA	low aq lab blk			SBlk808 2	lab	1656 Bis(2-ethylhexyl)phthalate 1.6 ug/l (2) 1750 Dehp 1.6 ug/l (2)
	↓			SBlk495 2/4	↓	ND
				SBlk495 2/3		ND
↓	low aq field blk			Chy24	HNUS	1750 Dehp 1.2 ug/l (2)

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN THE SAMPLE ANALYTICAL DATA SUMMARY. TENTATIVELY IDENTIFIED COMPOUNDS IN BLANKS ARE LISTED ON A SEPARATE FORM.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM QUANTITATION LIST, DIAGNOSTICS, CHROMATOGRAM AND/OR SPECTRA.

ND = none detected

17744

BLANK ANALYSIS RESULTS FOR TARGET COMPOUNDS

FRACTION	TYPE	CONC	MATRIX	SAMPLE #	SOURCE OF H_2O	CONTAMINANTS (CONCENTRATION / DETECTION LIMIT)
BNA	Low Solid lab blk			SBlk96	lab	1514 DNBP 0.52 ug/kg (2)
↓	↓			SBlk96	↓	1386 DEP 0.25 ug/kg (2) 1511 BBP 2.1 ug/kg (2)
↓	↓			SBlk97	↓	1200 DEP 0.25 ug/kg (2) 1430 DNBP 0.50 ug/kg (2) 1757 DEHP 1.3 ug/kg (2)
PEST	low solid lab blk			PBlk08	lab	ND
↓	field blk			Chy24	HNUS	ND
↓	SOLID LAB BLK Dil. Factor = 33			PBlk62	Lab	heptachlor 0.014 ug/kg (1) aldrin 0.059 ug/kg endosulfan sulfate 0.52 ug/kg methoxychlor 0.36 ug/kg DDE 0.18 ug/kg (3) gamma BHC 0.10 ug/kg (3) beta-BHC 0.41 ug/kg (3) endosulfan I 0.18 ug/kg (3) endosulfan II 0.32 ug/kg (3)
↓	↓			↓	↓	
↓	low solid lab blk D.F. = 33			PBlk58		heptachlor 0.07 ug/kg (1) methoxychlor 0.61 ug/kg (1) endosulfan I 0.09 ug/kg (3) beta-BHC 0.55 ug/kg (3) endosulfan II 0.33 ug/kg (3)
↓	low solid lab blk D.F. = 33			PBlk73	↓	heptachlor 0.081 ug/kg (1) Aroclor 1260 9.2 ug/kg (1) gamma BHC 0.41 ug/kg (3)

DF = 9.2 x 33

LABORATORY REPORTED FIELD BLANK DATA IS COMPARED WITH THE SAMPLE DATA IN A TABULATION FORM WITHIN THE SAMPLE ANALYTICAL DATA SUMMARY. TENTATIVELY IDENTIFIED COMPOUNDS IN BLANKS ARE LISTED ON A SEPARATE FORM.

COMMENTS:

(1) RESULT REPORTED BY LABORATORY AND CONFIRMED BY REVIEWER.

(2) RESULT INFERRED FROM QUANTITATION LIST, DIAGNOSTICS, CHROMATOGRAM AND/OR SPECTRA.

ND = none detected * = disagreement w/ amt. on 2 different columns.

(3) = compounds followed by (3) = peak only one column - most likely artifact [redacted] ND corresponding peak on 2nd column. Result in highest of two columns. (Not used to question sample if (3))

ORIGINAL

17744

BLANK ANALYSIS RESULTS FOR TENTATIVELY IDENTIFIED COMPOUNDS

1.0

ALL TENTATIVELY IDENTIFIED COMPOUNDS FOUND IN BLANK ANALYSES ARE LISTED BELOW:

SAMPLE #	FRACTION	SCAN #(S) OR R.T	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
VBlKZ8	VOA			ND	
VBlKAJT	VOA			ND	
VBlKDC	VOA			ND	
VBlKJ7	VOA	488	2% IS@ 608	NLS	
"	"	1640	2% IS@ 1212	NLS	(siloxane)
VBlKV8	VOA	491	3% IS@ 610	NLS	
↓	↓	1532	2% IS@ 1213	↓	
		1643	" " "	↓	(siloxane)
VBlKW9	VOA			ND	
VBlKAY	VOA	334	1% IS@ 610	NLS	(freon)
	"	490	6% IS@ 610	NLS	
Chy24	VOA			ND	
Chy25	VOA			ND	
SBlK08	BNA	683	3 ug/l	41, 45, 57, 87	
↓	↓	689	8% IS@ 772	NLS	
		1656	5% IS@ 1786	BBPhth.	
↓	↓	1750	7% " "	↓ Dehp	
SBlK95T	BNA	451	2 ug/l	masses in very mass from 70-157	
↓	↓	1082	3	siloxane	
		1197	2	43, 71	
		1500	6	43, 61, 69, 83, 97, 111	
		1509	5	43, 60, 101, 207	
		1975	3 ↓	69, 81, 95	
		547	7% IS@ 641		
		930	5% IS@ 837		
		1215	7% IS@ 1122		
↓	↓	1333	4% IS@ 1360		
SBlK95T	BNA			ND	
Chy24	BNA	684	5% IS@ 772	NLS	
↓	↓	690	5% " "	NLS	
↓	↓	1750	5% IS@ 1787	Dehp	
SBlK96	BNA	592	390 ug/kg	43, 69, 97, 112	IS: 653
		969	230	siloxane (73, 5?, 429...)	851
		1122	160	"	1169
		1258	160	"	1417
		1375	99	"	1865
		1660	66	"	2137
		1782	130	carbox acid (129)	
		2018	330 ↓	55, 57, 71, 83, 97, 112, 185	
		547	IS@ 653	NLS	
		609	5%		
		612	5%		
		672	3%		
		724	8%		
		825	4% IS@ 851		
↓	↓	1296	3% IS@ 1169	↓	

SCAN	ESTIMATED CONCENTRATION	COMMENTS
1236	9% IS@ 1169	NLS
1321	2% IS@ 1417	
1359	3%	
1400	1%	
1459	3%	
1460	8%	
1514	3%	
1574	4%	
1655	9% IS@ 1865	
1740	3%	
1818	4%	

BBPhth.

ND = none detected

NLS = no library search conducted

( ) = primary ions

17744

BLANK ANALYSIS RESULTS FOR TENTATIVELY IDENTIFIED COMPOUNDS

ALL TENTATIVELY IDENTIFIED COMPOUNDS FOUND IN BLANK ANALYSES ARE LISTED BELOW: p2

SAMPLE #	FRACTION	SCAN #(S) OR R.T	ESTIMATED CONCENTRATION	COMPOUND NAME	COMMENTS
Cont SB1696	BNA	1882	4% IS@ 1865	NLS	
"	"	2029	8% IS@ 2137	NLS	
SB1686	BNA	653	200 ug/kg	SNC	IS: 853
		756	140D	43, 69, 97	1049
		770	200	43, 69, 97, 112	1322
		717	5% IS@ 853	NLS	1561
		729	6%		2041
		806	7%	THF?	2538
		835	5%		
		1001	1% IS@ 1044		
		1112	" " "		
		1254	1% IS@ 1328		
		1358	2% "	DEP	
		1499	4% IS@ 1567		
		1507	9%		
		1597	2%		
		1685	2%		
		1766	1%		
		1848	9% IS@ 2041	BBP	
		2263	4% " "		
		827	4% IS@ 853		
SB1691	BNA	565	230 ug/kg	43, 69, 97	IS: 742
		657	270	43, 69, 97, 112	911
		703	130	43, 69, 97, 112	1154
		1664	170	siloxane	1362
		620	3% IS@ 742	NLS	1780
		634	5%		2041
		726	5%		
		788	3%		
		826	4%		
		900	1% IS@ 911		
		971	3% "		
		1097	8% IS@ 1154		
		1200	2%	DEP 16	
		1209	4%		
		1306	7% IS@ 1362		
		1376	3%		
		1389	6%		
		1430	4%	ONBP 17	
		1464	5%		
		1544	4%		
		1548	2%		
		1611	6% IS@ 1780		
		1625	4%		
		1726	4%		
	1795	1759	9%	DEHP 1.0	
		1881	3%		
		1979	2% IS@ 2041		
		2102	6% "		

ND = none detected
NLS = no library search conducted
( ) = primary ions

IS = internal standards

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	CHY02	99	97	101	0	0
02	CHY03	101	97	103	0	0
03	CHY04	98	90	99	0	0
04	CHY05	97	89	101	0	0
05	CHY06	101	93	100	0	0
06	CHY07	100	86	103	0	0
07	CHY08	108	93	103	0	0
08	CHY09	102	109	98	0	0
09	CHY10	104	94	111	0	0
10	CHY24	106	93	110	0	0
11	CHY25	106	92	107	0	0
12	CHY07MS	99	90	114	0	0
13	CHY07MSD	102	89	103	0	0
14	VBLKZB	104	92	102	0	0
15	VBLKAJ	100	88	103	0	0
16	VBLKDC	106	110	99	0	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix Spike - EPA Sample No.: CHY07

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	0	56.90	114	61-145
Trichloroethene	50.00	0	44.70	89	71-120
Benzene	50.00	0	47.60	95	76-127
Toluene	50.00	0	46.50	93	76-125
Chlorobenzene	50.00	0	44.80	90	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	63.40	127	11	14	61-145
Trichloroethene	50.00	43.70	87	2	14	71-120
Benzene	50.00	48.70	97	2	11	76-127
Toluene	50.00	45.10	90	3	13	76-125
Chlorobenzene	50.00	44.70	89	1	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: CLP,17744,CHY02,CHY07,LOW,WATER,477460,VOA,EPA,F50051
DB624,CS920202A51,BF920202A51,CB920202A51,CN077447A51,CN077448A

2B

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Level:(low/med) LOW

	EPA SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	CHY11	110	103	107	0	0
02	CHY12	106	98	106	0	0
03	CHY13	108	94	110	0	0
04	CHY14	101	96	98	0	0
05	CHY15	112	101	110	0	0
06	CHY16	96	98	104	0	0
07	CHY17	127	111	118	0	0
08	CHY18	110	98	107	0	0
09	CHY19	105	95	103	0	0
10	CHY20	123	104	108	0	0
11	CHY21	119	99	104	0	0
12	CHY22	109	101	103	0	0
13	CHY23	93	90	96	0	0
14	CHY26	86	80	85	0	0
15	CHY18MS	109	98	105	0	0
16	CHY18MSD	108	97	107	0	0
17	VBLKT7	104	97	100	0	0
18	VBLKV8	93	89	89	0	0
19	VBLKW9	93	89	98	0	0
20	VBLKA4	101	96	98	0	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(84-138)
SMC2 (BFB) = Bromofluorobenzene	(59-113)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(70-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix Spike - EPA Sample No.: CHY18 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	69.40	0	68.19	98	59-172
Trichloroethene	69.40	0	63.33	91	62-137
Benzene	69.40	0	74.45	107	66-142
Toluene	69.40	0	69.03	99	59-139
Chlorobenzene	69.40	0	66.11	95	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	69.40	72.78	105	7	22	59-172
Trichloroethene	69.40	64.86	93	2	24	62-137
Benzene	69.40	76.11	110	3	21	66-142
Toluene	69.40	72.50	104	5	21	59-139
Chlorobenzene	69.40	69.17	100	5	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: CLP
CAP, GT920131C18,BG920131C18, , , ,

7/27/92 330 029A

~~028A~~

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	CHY11	88	83	67	70	72	45	57	78	0
02	CHY12	58	51	76	47	42	33	35	48	0
03	CHY13	62	63	70	50	50	36	40	60	0
04	CHY14	75	64	79	66	69	39	54	60	0
05	CHY15	0 D	0 D	87	0 D	0 D	64	0 D	0 D	0
06	CHY16	58	58	76	38	19 *	26	24	34	1
07	CHY17	76	68	79	60	47	13 *	40	63	1
08	CHY18	79	64 ✓	79 ✓	59 ✓	48 ✓	18 *	42	63	1
09	CHY18DL	84	75 ✓	91 ✓	69 ✓	68 ✓	46 ✓	55	68	0
10	CHY19	77	71	66	64	51	21	43	64	0
11	CHY20	45	59	63	45	66	27	45	55	0
12	CHY20DL	71	65	87	45	56	46	41	0 D	0
13	CHY21	42	44	40	42	46	40	34	41	0
14	CHY22	80	71	72	50	28	2 *	27	64	1
15	CHY22RE	58	71	81	55	35 ✓	8 *	32 ✓	53	1
16	CHY23	47	45	49	37	39	34	31	43	0
17	CHY26	72	65	70	68	62	55	50	62	0
18	CHY18MS	71	60	72	51	40	12 *	35	60	1
19	CHY18MSD	79	69	82	66	63	53 ✓	49	69	0
20	SBLK96	61	52	88	47	44	37	35	52	0
21	SBLK86	38	39	44	41	41	23	30	40	0
22	SBLK97	51	49	58	48	45	42	37	47	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix Spike - EPA Sample No.: CHY18 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
Phenol	3430	0	1928	56	26- 90
2-Chlorophenol	3430	0	1704	50	25-102
1,4-Dichlorobenzene	2280	0	1366	60	28-104
N-Nitroso-di-n-prop.(1)	2280	0	1467	64	41-126
1,2,4-Trichlorobenzene	2280	0	1435	63	38-107
4-Chloro-3-methylphenol	3430	0	1869	54	26-103
Acenaphthene	2280	88.65	1499	62	31-137
4-Nitrophenol	3430	0	2367	69	11-114
2,4-Dinitrotoluene	2280	0	1307	57	28- 89
Pentachlorophenol	3430	0	78.14	2 *	17-109
Pyrene	2280	2691	3263	25 *	35-142

TBP surr. low

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	3430	2276	66	16	35	26- 90
2-Chlorophenol	3430	2166	63	23	50	25-102
1,4-Dichlorobenzene	2280	1426	63	5	27	28-104
N-Nitroso-di-n-prop.(1)	2280	1604	70	9	38	41-126
1,2,4-Trichlorobenzene	2280	1471	65	3	23	38-107
4-Chloro-3-methylphenol	3430	2490	73	30	33	26-103
Acenaphthene	2280	1650	68	9	19	31-137
4-Nitrophenol	3430	2495	73	6	50	11-114
2,4-Dinitrotoluene	2280	1353	59	3	47	28- 89
Pentachlorophenol	3430	302.0	9 *	127 *	47	17-109
Pyrene	2280	3564	38	41 *	36	35-142

TBP surr ctd

(1) N-Nitroso-di-n-propylamine

low pyrene recov. possible to spl inhomogeneity - res. est.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 2 out of 11 outside limits
Spike Recovery: 3 out of 22 outside limits

COMMENTS: CLP
CAP, HH920210C21,DH920210C21, , , ,

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	CHY02	102	98	103	96	98	92	75	92	0
02	CHY03	87	81	103	79	83	77	61	81	0
03	CHY04	79	72	92	70	73	63	56	76	0
04	CHY05	90	82	109	79	78	75	63	86	0
05	CHY06	71	63	79	60	57	63	47	64	0
06	CHY07	83	71	94	75	79	74	60	78	0
07	CHY08	83	71	85	72	77	79	57	75	0
08	CHY09	84	73	70	72	79	72	57	84	0
09	CHY10	83	73	89	70	70	64	56	77	0
10	CHY24	65	65	93	73	70	53	55	64	0
11	CHY07MS	83	75	104	78	77	84	56	71	0
12	CHY07MSD	82	73	93	70	75	79	54	71	0
13	SBLK95	76	68	94	71	73	31	55	71	0
14	SBLK08	56	57	77	64	62	45	49	55	0
15	SBLK95	102	93	123	103	104	72	77	92	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-110)	
S5 (2FP)	= 2-Fluorophenol	(21-110)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix Spike - EPA Sample No.: CHY07

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	75.00	0	66.20	88	12-110
2-Chlorophenol	75.00	0	64.50	86	27-123
1,4-Dichlorobenzene	50.00	0	38.30	77	36- 97
N-Nitroso-di-n-prop.(1)	50.00	0	46.50	93	41-116
1,2,4-Trichlorobenzene	50.00	0	41.00	82	39- 98
4-Chloro-3-methylphenol	75.00	0	71.40	95	23- 97
Acenaphthene	50.00	0	43.00	86	46-118
4-Nitrophenol	75.00	1.320	92.10	121 *	10- 80
2,4-Dinitrotoluene	50.00	0	53.00	106 *	24- 96
Pentachlorophenol	75.00	0	39.00	52	9-103
Pyrene	50.00	0	54.30	109	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	75.00	62.70	84	5	42	12-110
2-Chlorophenol	75.00	62.40	83	4	40	27-123
1,4-Dichlorobenzene	50.00	35.60	71	8	28	36- 97
N-Nitroso-di-n-prop.(1)	50.00	46.60	93	0	38	41-116
1,2,4-Trichlorobenzene	50.00	39.60	79	4	28	39- 98
4-Chloro-3-methylphenol	75.00	65.90	88	8	42	23- 97
Acenaphthene	50.00	40.50	81	6	31	46-118
4-Nitrophenol	75.00	87.10	114 *	6	50	10- 80
2,4-Dinitrotoluene	50.00	48.70	97 *	9	38	24- 96
Pentachlorophenol	75.00	64.70	86	49	50	9-103
Pyrene	50.00	48.20	96	13	31	26-127

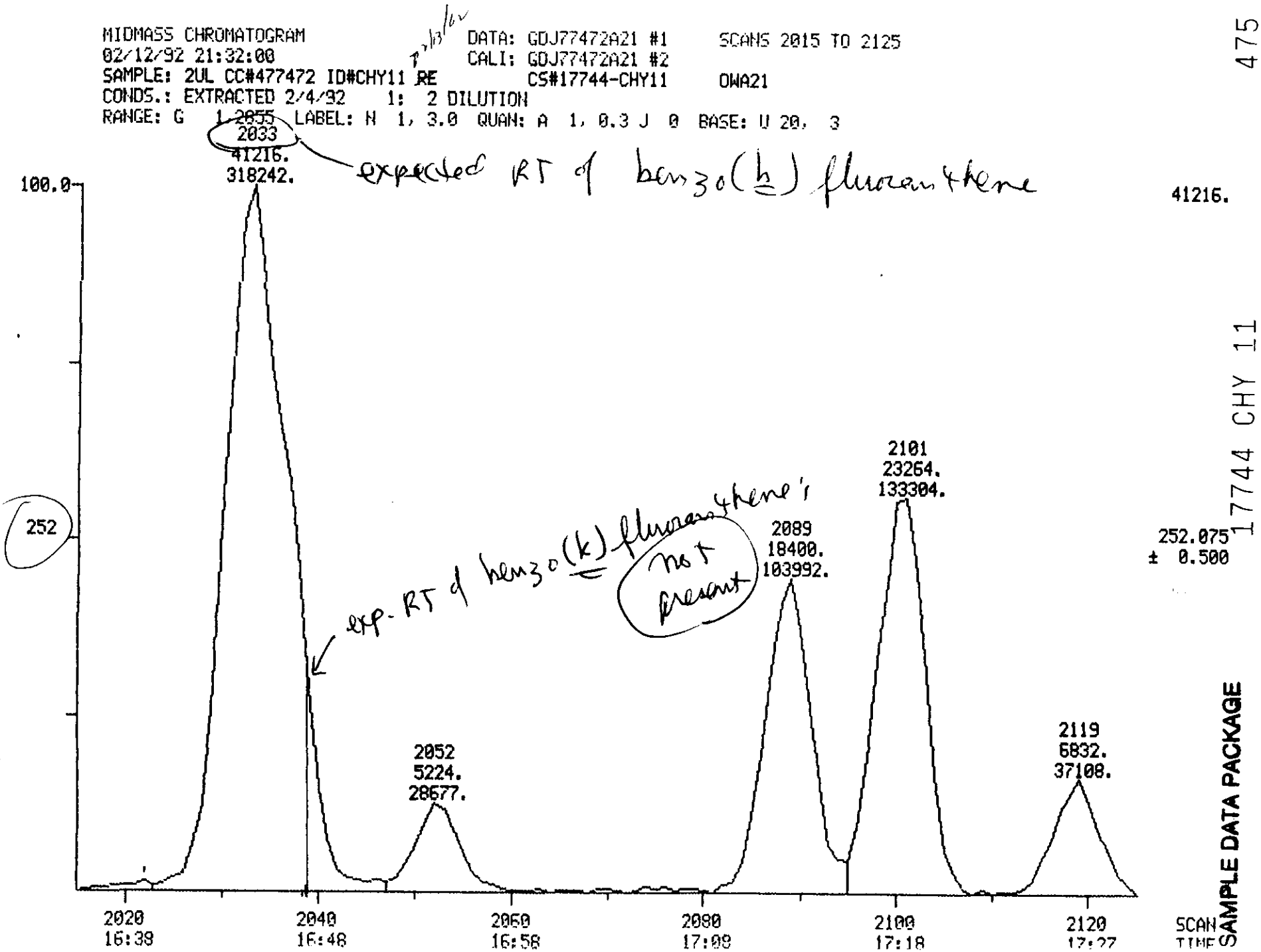
(1) N-Nitroso-di-n-propylamine

VR

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 11 outside limits
Spike Recovery: 4 out of 22 outside limits

COMMENTS: CLP
CAP, HG920203B52,DH920203B52, , ,


MIDMASS CHROMATOGRAM
02/12/92 21:32:00
SAMPLE: 2UL CC#477472 ID#CHY11 RE
CONDS.: EXTRACTED 2/4/92 1: 2 DILUTION
RANGE: G 1.2855 LABEL: N 1, 3.0 QUAN: A 1, 0.3 J 0 BASE: U 20, 3
DATA: GDJ77472A21 #1
CALI: GDJ77472A21 #2
CS#17744-CHY11
SCANS 2015 TO 2125
OWA21
475
17744 CHY 11
SAMPLE DATA PACKAGE
2033
41216.
318242.
expected RT of benzo(b) fluoranthene
100.0
41216.
252
252.075
± 0.500
exp. RT of benzo(k) fluoranthene's
not present
2089
18400.
103992.
2101
23264.
133304.
2052
5224.
28677.
2119
6832.
37108.
2020
16:39
2040
16:48
2060
16:58
2080
17:08
2100
17:18
2120
SCAN
TIME

51 444 PHENANTHRENE (Q4#7) <85-01-8>
52 583 CARBAZOLE
53 403 ANTHRACENE (Q4#8) <120-12-7>
54 426 DI-N-BUTYL PHTHALATE (Q4#9) <84-74-2>
55 431 FLUORANTHENE (Q4#10) <206-44-0>
56 *459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
#634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY 11

Reviewer deleted Benz(e) used proper RRF

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1403	11:33	45	1.003	A BV	318796.	26.529 NG	4.33 y
52	167	1440	11:52	45	1.029	A BB	22824.	2.666 NG	0.44 y
53	178	1411	11:37	45	1.009	A VV	62644.	5.992 NG	0.98 y
54	NOT FOUND								
55	202	1603	13:12	45	1.146	A BV	532992.	60.866 NG	9.93 y
56	240	1846	15:12	56	1.000	A VB	157164.	20.000 NG	3.26
57	202	1641	13:31	56	0.889	A BB	477385.	30.897 NG	5.04 y
58	149	1751	14:25	56	0.949	A BB	11723.	1.428 NG	0.23
59	NOT FOUND								
	228	1845	15:12	56	0.999	A BV	229611.	25.381 NG	4.14 y
6.	149	1850	15:14	56	1.002	A BB	37186.	2.979 NG	0.49 y
62	228	1851	15:15	56	1.003	A VV	173006.	19.377 NG	3.16 y
63	264	2113	17:24	63	1.000	A BB	129628.	20.000 NG	3.26
64	NOT FOUND								
65	252	2033	16:45	63	0.962	A BV	318242 ~~322113.~~	40.714 ~~63.222 NG~~	7.05 yes

x 92 = 4,000 ug/kg b(b)f (39%)

Quantitation Report File: GDJ77472A21

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
~~56~~	~~252~~	~~2033~~	~~16:45~~	~~63~~	~~0.962~~	~~A BV~~	~~322113.~~	~~39.375 NG~~	~~6.43~~ NO
57	252	2101	17:18	63	0.994	A VV	133704 ~~144998.~~	20.07 ~~21.763~~ NG	3.55 y
68	276	2411	19:51	63	1.141	A BB	95500 ~~105072.~~	13.097 ~~14.414~~ NG	2.35 y
59	NOT FOUND 2417						26298	4.439	y
70	276	2504	20:37	63	1.185	A BB	81052 ~~86434.~~	12.505 ~~13.337~~ NG	2.18 y
71	112	486	4:00	1	0.728	A BB	157976.	27.140 NG	4.43
72	99	618	5:05	1	0.925	A BV	192244.	26.368 NG	4.30
73	132	636	5:14	1	0.952	A BB	145932.	21.386 NG	3.49
74	152	691	5:41	1	1.034	A BB	88820.	19.615 NG	3.20
75	82	753	6:12	13	0.871	A BV	161808.	22.017 NG	3.59
76	172	1041	8:34	26	0.904	A BV	231208.	20.846 NG	3.40
77	330	1282	10:33	26	1.114	A BB	[illegible]	[illegible]	

2/13/92

55 431 FLUORANTHENE (Q4#10) <206-44-0>
56 *459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CC.
STD
2/12

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
51	178	1407	11:35	45	1.003	A BV	402592.	25.000 NG	1.30	
52	167	1443	11:53	45	1.029	A BV	286820.	25.000 NG	1.30	
53	178	1415	11:39	45	1.009	A VB	350268.	25.000 NG	1.30	
54	149	1502	12:22	45	1.071	A BV	551675.	25.000 NG	1.30	
55	202	1606	13:14	45	1.145	A BV	293372.	25.000 NG	1.30	
56	240	1849	15:14	56	1.000	A BB	121620.	20.000 NG	1.04	IS 5
57	202	1644	13:32	56	0.889	A BB	298912.	25.000 NG	1.30	
58	149	1754	14:27	56	0.949	A BV	158868.	25.000 NG	1.30	
59	252	1843	15:11	56	0.997	A BB	23160.	25.000 NG	1.30	
60	228	1848	15:13	56	0.999	A BV	175017.	25.000 NG	1.30	
61	149	1853	15:16	56	1.002	A BB	241512.	25.000 NG	1.30	
62	228	1854	15:16	56	1.003	A VB	172728.	25.000 NG	1.30	IS 6
63	264	2114	17:25	63	1.000	A BB	83140.	20.000 NG	1.04	
64	149	1963	16:10	63	0.929	A BV	318104.	25.000 NG	1.30	
65	252	2034	16:45	63	0.962	A BV	119496.	25.000 NG	1.30	b(b)f

SAMPLE DATA PACKAGE

17744 CHY 11 1759

Quantitation Report File: HG920212B21

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
66	252	2039	16:47	63	0.965	A VB	131170.	25.000 NG	1.30	b(k)f
67	252	2102	17:19	63	0.994	A BV	106828.	25.000 NG	1.30	
68	276	2411	19:51	63	1.140	A BB	116884.	25.000 NG	1.30	
69	278	2419	19:55	63	1.144	A BB	95000.	25.000 NG	1.30	
70	276	2500	20:35	63	1.183	A BB	103912.	25.000 NG	1.30	
71	112	487	4:01	1	0.725	A BB	157576.	25.000 NG	1.30	
72	99	621	5:07	1	0.924	A BV	197372.	25.000 NG	1.30	
73	132	639	5:16	1	0.951	A BV	184728.	25.000 NG	1.30	
74	152	695	5:43	1	1.034	A BB	122584.	25.000 NG	1.30	
75	82	757	6:14	13	0.871	A BB	228712.	25.000 NG	1.30	
76	172	1045	8:36	26	0.905	A BB	326200.	25.000 NG	1.30	
77	330	1286	10:35	26	1.113	A BB	56208.	25.000 NG	1.30	
78	244	1671	13:46	56	0.904	A BB	196454.	25.000 NG	1.30	

No Ret(L) Ratio RRT(L) Ratio Amnt Amnt(L) ...

COMPUCHEM LABS, INC.

02/12/92 21:32:02 + 20:37

SAMPLE: 2UL CC#477472 ID#CHY11 RE CS#17744-CHY11 CWA21

CONDS.: EXTRACTED 2/4/92 1: 2 DILUTION

MID LIBRARY SEARCH (LIBRARYNC)
DATA: GDJ77472A21 #2504 BASE M/Z: 67
ENHANCED (123 2N 0T) RIC: 10254.

5234

SAMPLE

not characteristic mass profile

C22.H12 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>

5034

M WT 750
B PK 276
RANK 1
70
PUR 145

flag as tentative

SAMPLE MINUS LIBRARY

5034

0

-5094

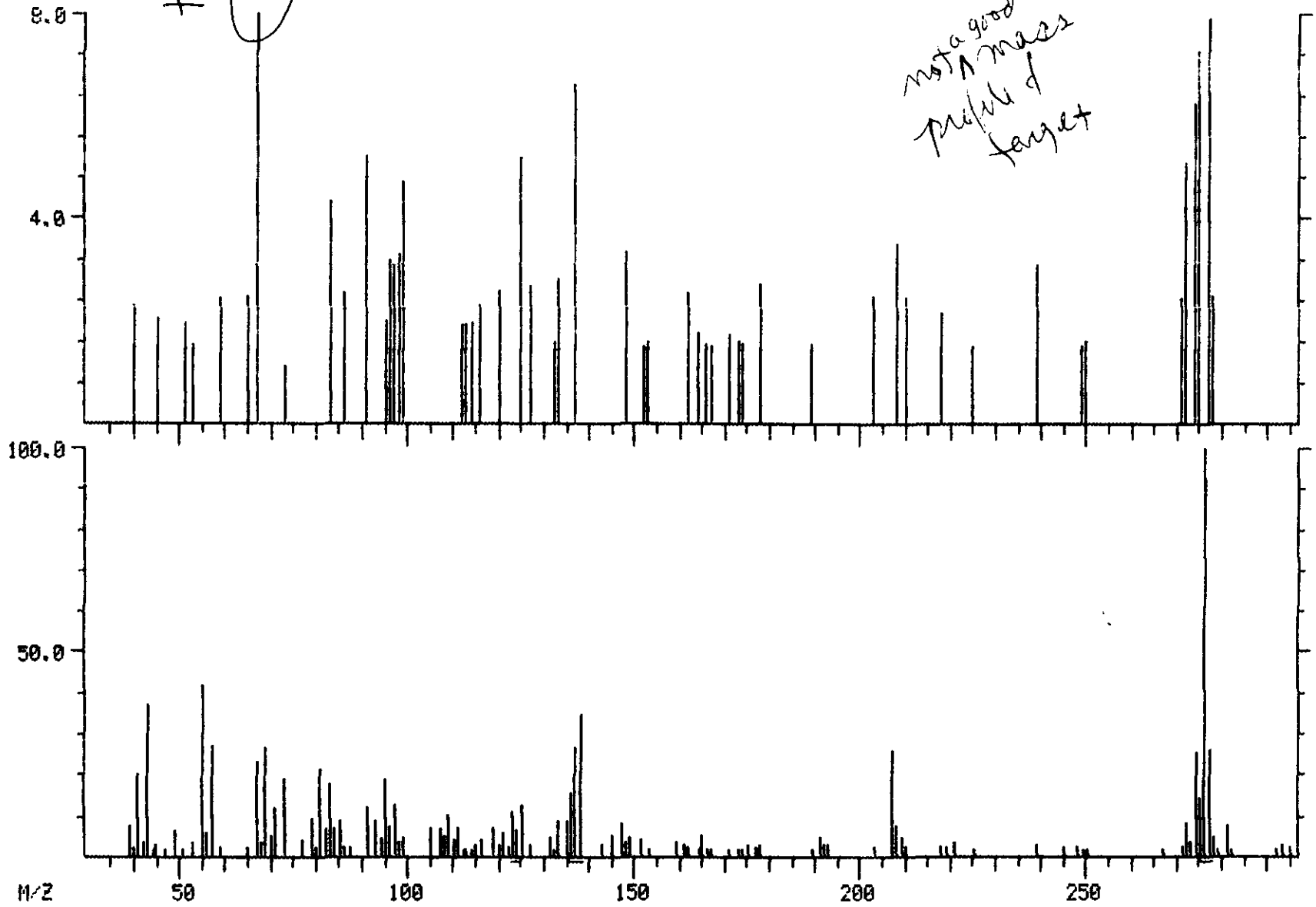
M/Z 50 100 150 200 250

17744 CHY 11

SAMPLE DATA PACKAGE

MID DUAL MASS SPECTRUM
02/12/92 21:32:00 + 20:37
SECOND SPECTRUM
SAMPLE: 2UL CC#477472 ID#CHY11 BE CS#17744-CHY11 OWA21
488 BENZO(G,H,I)PERYLENE (Q6#8) (191-24-2)

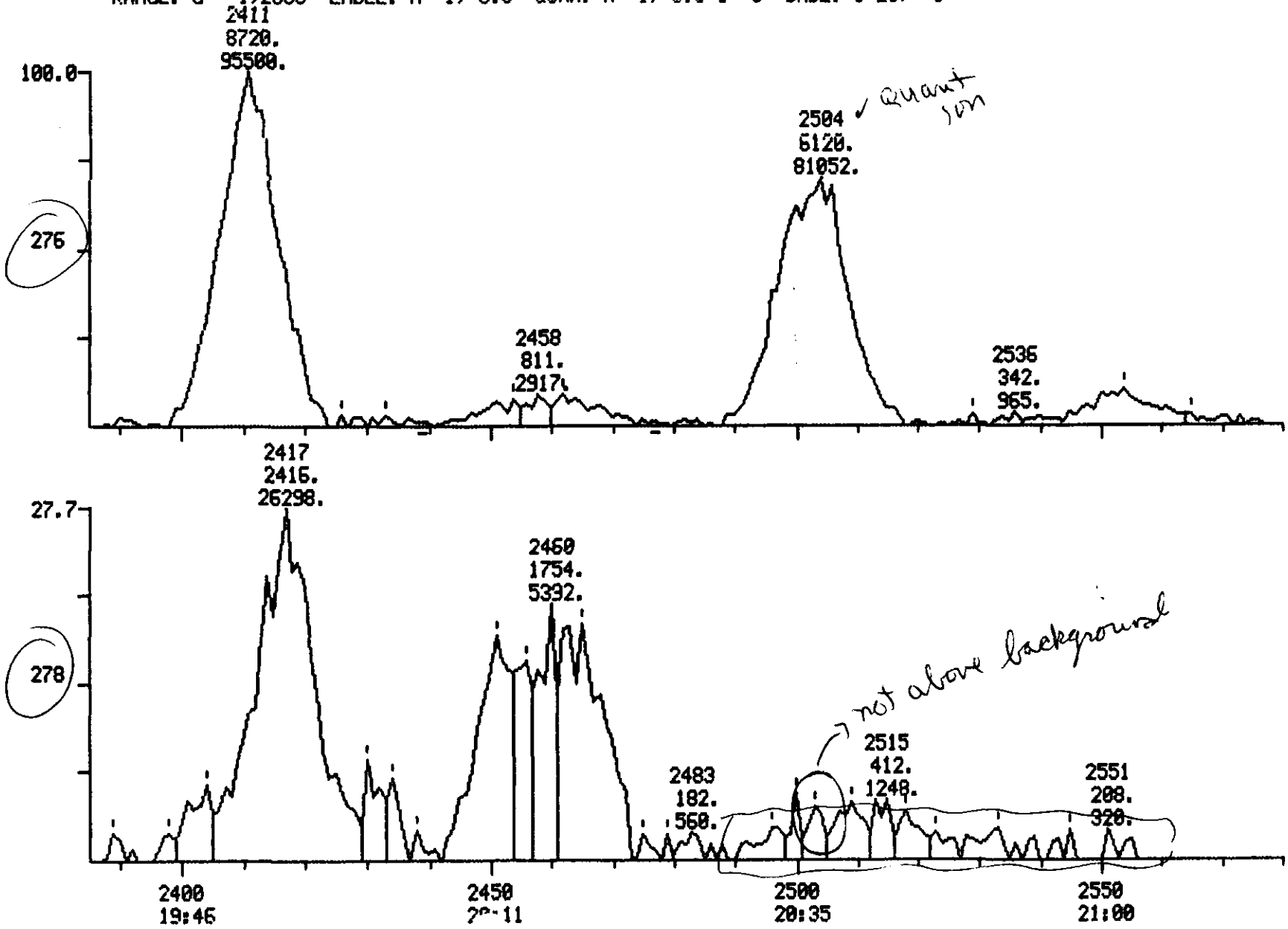
DATA: GDJ77472A21 #2504 BASE M/Z: 67/ 276
ENHANCED (10B 2N 0T) RIC: 10159./ 63359.
DATA: UNENHANCED #2504 COMPUCHEM LABS, INC.



17744 CHY 11

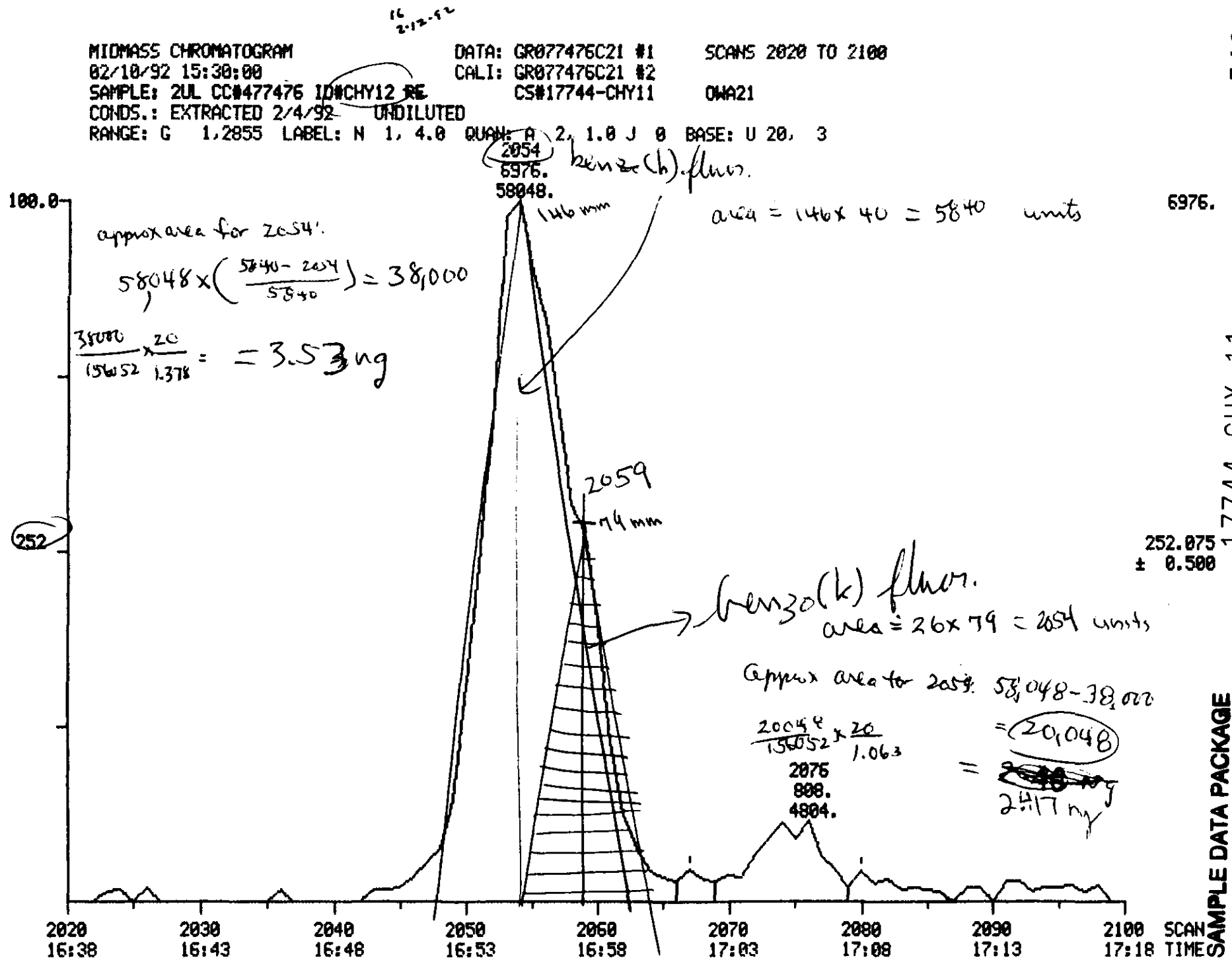
SAMPLE DATA PACKAGE

MIDMASS CHROMATOGRAMS DATA: GDJ7472A21 #1 SCANS 2385 TO 2580
02/12/92 21:32:00 CALI: GDJ7472A21 #2
SAMPLE: 2UL CC#477472 ID#CHY11 RE CS#17744-CHY11 OWA21
CONDS.: EXTRACTED 2/4/92 1: 2 DILUTION
RANGE: G 1,2855 LABEL: N 1, 3.0 QUAN: A 1, 0.3 J 0 BASE: U 20, 3



17744 CHY 11

SAMPLE DATA PACKAGE


MIDMASS CHROMATOGRAM
02/10/92 15:30:00
SAMPLE: 2UL CC#477476 ID#CHY12 RE
CONDS.: EXTRACTED 2/4/92 UNDILUTED
RANGE: G 1,2855 LABEL: N 1, 4.0 QUAN: A 2, 1.0 J 0 BASE: U 20, 3
DATA: GR077476C21 #1
CALI: GR077476C21 #2
CS#17744-CHY11
SCANS 2020 TO 2100
OWA21
2054
6976.
58048.
146 mm
benzo(h).fluor.
area = 146 x 40 = 5840 units
6976.
100.0
approx area for 2054.
58048 x (5840 - 2054 / 5840) = 38,000
38000 / 15052 x 20 / 1.378 = = 3.53 ng
2059
74 mm
252
252.075
± 0.500
benzo(k) fluor.
area = 26 x 79 = 2054 units
Approx area for 2059. 58,048 - 38,022
20048 / 15052 x 20 / 1.063
= 20,048
= 2.17 ng
2075
808.
4804.
2020 16:38
2030 16:43
2040 16:48
2050 16:53
2060 16:58
2070 17:03
2080 17:08
2090 17:13
2100 17:18
SCAN TIME
17744 CHY 11
SAMPLE DATA PACKAGE

52 583 CARBAZOLE
53 403 ANTHRACENE (Q4#8) <120-12-7>
54 426 DI-N-BUTYL PHTHALATE (Q4#9) <84-74-2>
55 431 FLUORANTHENE (Q4#10) <206-44-0>
56 *459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

Chy12

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1420	11:42	45	1.003	A BV	38952.	2.013 NG	0.50 yes
52	NOT FOUND								
53	NOT FOUND								
54	149	1515	12:29	45	1.070	A BB	21156.	1.079 NG	0.27 yes
55	202	1620	13:20	45	1.144	A BV	75756.	4.987 NG	1.23 yes
56	240	1864	15:21	56	1.000	A BB	247296.	20.000 NG	4.92 155
57	202	1659	13:40	56	0.890	A BB	71364.	4.397 NG	1.08 yes
58	149	1768	14:34	56	0.948	A BB	6620.	1.037 NG	0.26 yes
59	NOT FOUND								
60	228	1868	15:23	56	1.002	A*BV	36220 71176. 2.912	5.724 NG	1.41 yes
61	149	1866	15:22	56	1.001	A BB	49501.	4.829 NG	1.19 yes
62	228	1868	15:23	56	1.002	A VV	33032 34888. 2.866	2.978 NG	0.73 yes
63	264	2138	17:36	63	1.000	A BV	156052.	20.000 NG	4.92 156
64	NOT FOUND								
65 CE	252	2054	16:55	63	0.961	A BV	38,000 57470. 6.099	3.534 = 260 ug/kg 5.347 NG	1.32 yes

SAMPLE DATA PACKAGE 17744 CHY 11

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66 CE	252	2059 2054	16:55	63	0.961	A BV	20,098 57470. 6.098	2.417 6.927 NG	1.70 yes
67	252	2125	17:30	63	0.994	A VB	20160.	2.499 NG	0.61 yes
68	276	2443	20:07	63	1.143	A*BB	11004.	1.214 NG	0.30 yes
69	NOT FOUND								
70	276	2540	20:55	63	1.188	A BB	9116.	1.190 NG	0.29 yes
71	112	501	4:08	1	0.734	A BV	221964.	31.843 NG	7.83
72	99	632	5:12	1	0.925	A BV	291655.	35.430 NG	8.72
73	132	651	5:22	1	0.953	A BB	212764.	26.408 NG	6.50
74	152	706	5:49	1	1.034	A BB	134212.	24.090 NG	5.93
75	82	768	6:19	13	0.873	A BV	233100.	29.205 NG	7.19
76	172	1057	8:42	26	0.905	A BB	428016.	25.675 NG	6.32
77	330	1299	10:42	26	1.112	A BB	72364.	24.454 NG	6.02
78	244	1685	13:53	56	0.904	A BB	423108.	38.075 NG	9.37

=170 ug/kg 9-12-92

No Ret(L) Ratio RRT(L) Ratio Amnt Amnt(L) R.Fac R.Fac(L) Ratio

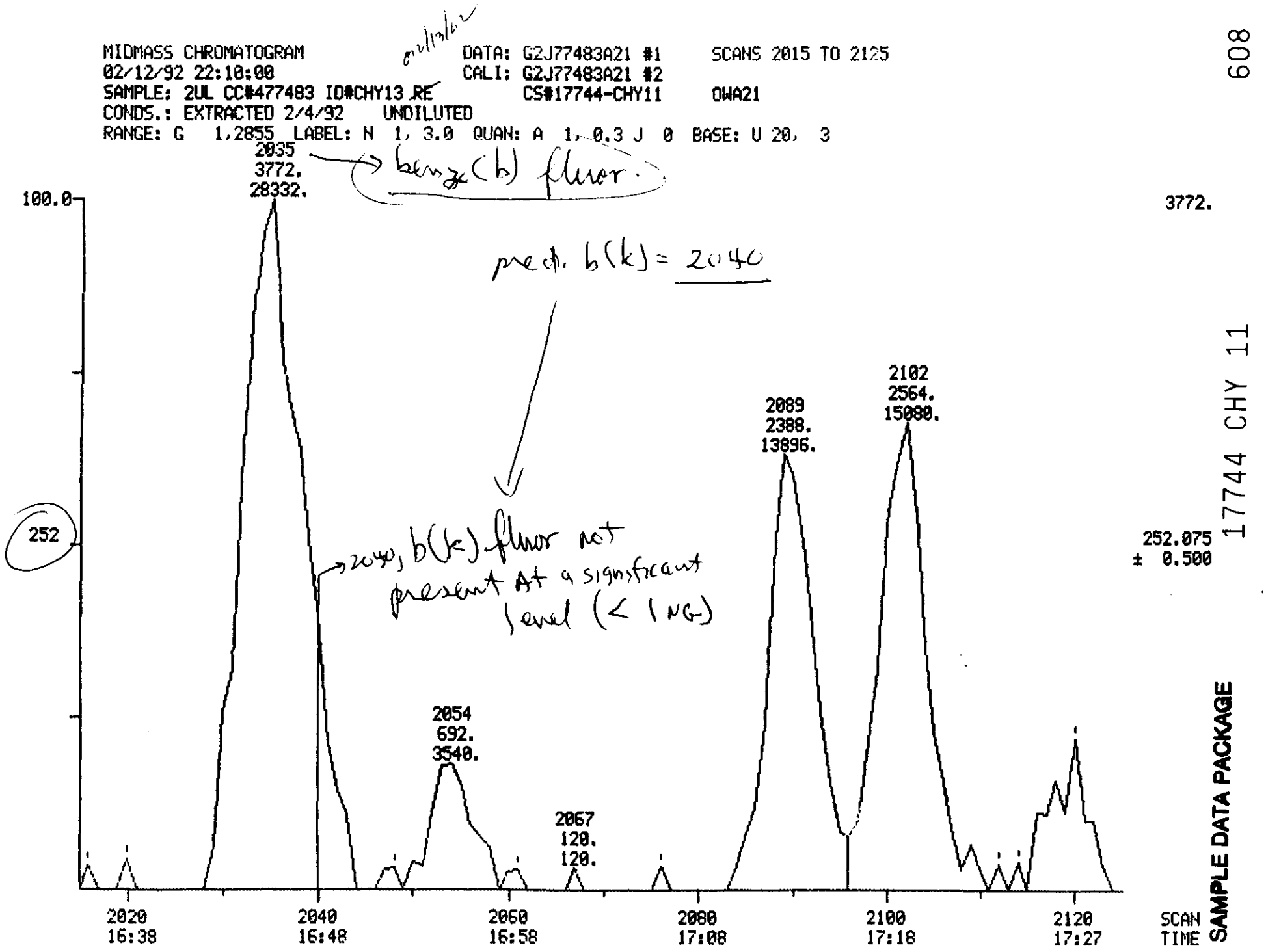
52 583 CARBAZOLE
53 403 ANTHRACENE (Q4#8) <120-12-7>
54 426 DI-N-BUTYL PHTHALATE (Q4#9) <84-74-2>
55 431 FLUORANTHENE (Q4#10) <206-44-0>
56 *459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3> STD
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2> 2/10
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
51	178	1421	11:42	45	1.003	A BV	342912.	25.000 NG	1.30	
52	167	1459	12:01	45	1.030	A BV	167213.	25.000 NG	1.30	
53	178	1430	11:47	45	1.009	A VB	266276.	25.000 NG	1.30	
54	149	1516	12:29	45	1.070	A BB	599981.	25.000 NG	1.30	
55	202	1622	13:21	45	1.145	A BB	291538.	25.000 NG	1.30	
56	240	1865	15:21	56	1.000	A BB	200340.	20.000 NG	1.04	155
57	202	1660	13:40	56	0.890	A BB	353288.	25.000 NG	1.30	
58	149	1769	14:34	56	0.949	A BV	127104.	25.000 NG	1.30	
59	252	1859	15:19	56	0.997	A BB	24716.	25.000 NG	1.30	
60	228	1864	15:21	56	0.999	A BV	275795.	25.000 NG	1.30	
61	149	1867	15:22	56	1.001	A BV	291028.	25.000 NG	1.30	
62	228	1870	15:24	56	1.003	A VB	208441.	25.000 NG	1.30	
63	264	2138	17:36	63	1.000	A BV	113516.	20.000 NG	1.04	156
64	149	1978	16:17	63	0.925	A VB	249340.	25.000 NG	1.30	
65	252	2055	16:55	63	0.961	A BV	203783.	25.000 NG	1.30	b(b)f

SAMPLE DATA PACKAGE 17744 CHY 11 1739

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
66	252	2060	16:58	63	0.964	A VB	167083.	25.000 NG	1.30	b(k)f
67	252	2126	17:30	63	0.994	A BB	133588.	25.000 NG	1.30	
68	276	2448	20:10	63	1.145	A BB	133551.	25.000 NG	1.30	
69	278	2455	20:13	63	1.148	A BB	123552.	25.000 NG	1.30	
70	276	2544	20:57	63	1.190	A BB	128353.	25.000 NG	1.30	
71	112	499	4:07	1	0.730	A BB	152868.	25.000 NG	1.30	
72	99	632	5:12	1	0.924	A BV	182372.	25.000 NG	1.30	
73	132	651	5:22	1	0.952	A BB	148420.	25.000 NG	1.30	
74	152	707	5:49	1	1.034	A BB	108440.	25.000 NG	1.30	
75	82	770	6:20	13	0.873	A VB	207772.	25.000 NG	1.30	
76	172	1058	8:43	26	0.905	A BB	250424.	25.000 NG	1.30	
77	330	1300	10:42	26	1.112	A BB	59392.	25.000 NG	1.30	
78	244	1685	13:53	56	0.903	A BB	215176.	25.000 NG	1.30	

No Ret(L) Ratio RRT(L) Ratio Amnt Amnt(L) [illegible]


MIDMASS CHROMATOGRAM
02/12/92 22:10:00
DATA: G2J77483A21 #1
CALI: G2J77483A21 #2
SCANS 2015 TO 2125
SAMPLE: 2UL CC#477483 ID#CHY13 RE
CS#17744-CHY11
OWA21
CONDS.: EXTRACTED 2/4/92 UNDILUTED
RANGE: G 1,2855 LABEL: N 1, 3.0 QUAN: A 1, 0.3 J 0 BASE: U 20, 3
608
2035
3772.
28332.
benz(b) fluor.
100.0
3772.
prob. b(k) = 2040
252
2089
2388.
13896.
2102
2564.
15080.
2040, b(k) fluor not present at a significant level (< 1 NG)
252.075
± 0.500
17744 CHY 11
2054
692.
3540.
2067
120.
120.
2020
16:38
2040
16:48
2060
16:58
2080
17:08
2100
17:18
2120
17:27
SCAN
TIME
SAMPLE DATA PACKAGE

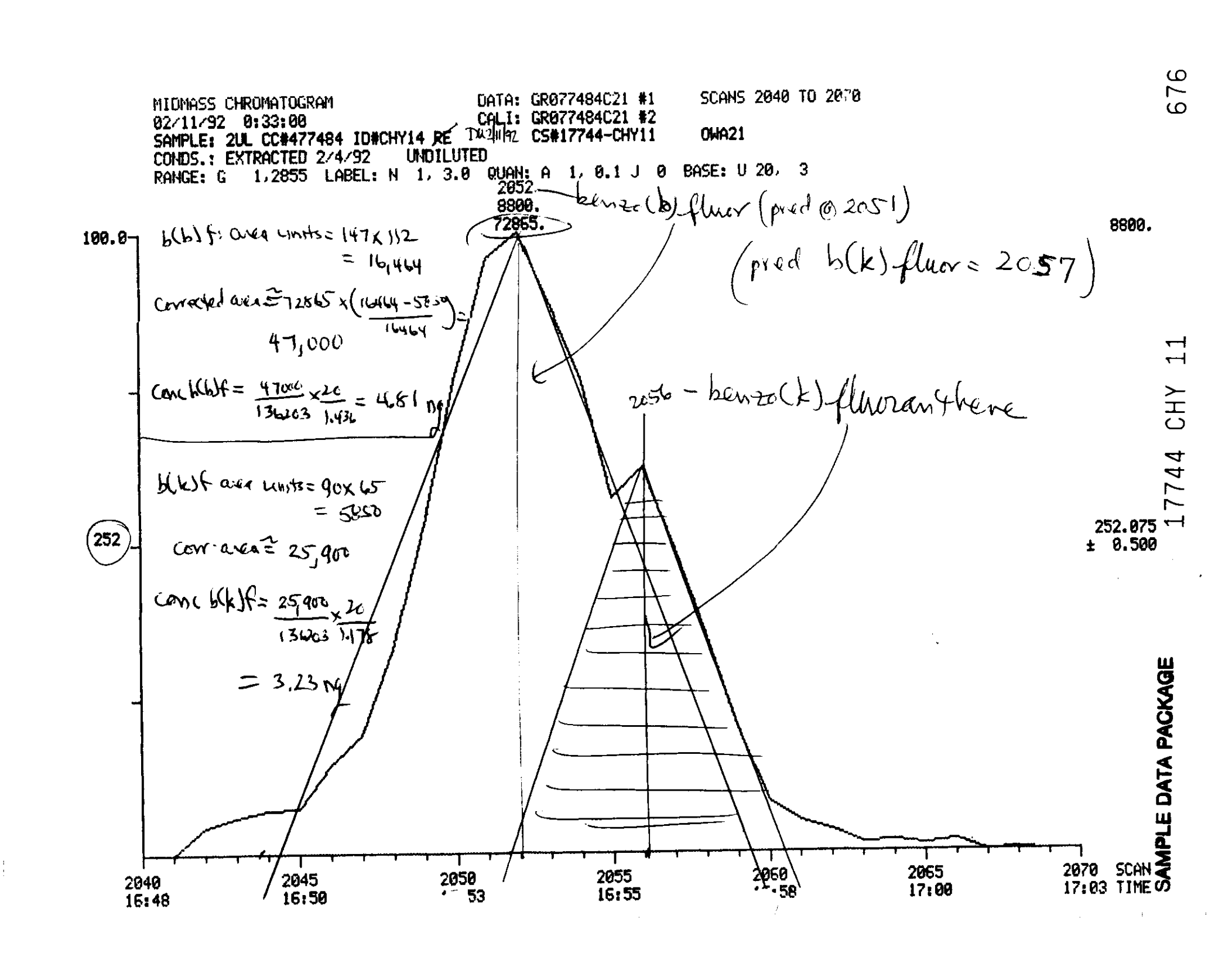
55 431 FLUORANTHENE (Q4#10) <206-44-0>
56 *459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY13

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1405	11:34	45	1.003	A BV	28368.	1.391 NG	0.34
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	202	1605	13:13	45	1.146	A BB	42024.	2.827 NG	0.69
56	240	1848	15:13	56	1.000	A BB	170924.	20.000 NG	4.85
57	202	1643	13:32	56	0.889	A BB	43840.	2.609 NG	0.63
58	NOT FOUND								
59	NOT FOUND								
60	228	1852 46	15:15	56	1.002	A*BB	14200 ~~38464.~~	1.952 ~~3.909~~ NG	0.95
61	149	1852	15:15	56	1.002	A BB	13924.	1.026 NG	0.25
62	228	1852	15:15	56	1.002	A VB	19264.	1.984 NG	0.48
63	264	2114	17:25	63	1.000	A BB	137048.	20.000 NG	4.85
64	NOT FOUND								
65	252	2035	16:45	63	0.963	A BB	28332.	3.42 ~~3.596~~ NG	0.87

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66	~~252~~	~~2035~~	~~16:45~~	~~63~~	~~0.963~~	~~A BB~~	~~28332.~~	~~3.276 NG~~	0.79
67	252	2102	17:19	63	0.994	A VB	15080.	2.141 NG	0.52
68	276	2412	19:52	63	1.141	A BB	12904.	1.674 NG	0.41
69	NOT FOUND								
70	276	2503	20:37	63	1.184	A BB	12060.	1.760 NG	0.43
71	112	487	4:01	1	0.727	A BV	302380.	37.696 NG	9.14
72	99	620	5:06	1	0.925	A BV	377685.	37.590 NG	9.11
73	132	638	5:15	1	0.952	A BV	283556.	30.154 NG	7.31
74	152	693	5:42	1	1.034	A BB	188116.	30.146 NG	7.31
75	82	755	6:13	13	0.871	A BB	325917.	31.031 NG	7.52
76	172	1044	8:36	26	0.905	A BV	512132.	31.329 NG	7.60
77	330	1285	10:35	26	1.114	A BB	75332.	26.744 NG	6.48
78	244	1670	13:45	56	0.904	A BV	387008.	35.043 NG	8.50

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
51	11:35	1.00	10.000	0.10	1.39	25.00	0.064	1.144	0.06
52	11:53		1.000						
53	11:39		10.000						


MIDMASS CHROMATOGRAM
02/11/92 0:33:00
SAMPLE: 2UL CC#477484 ID#CHY14 RE
CONDS.: EXTRACTED 2/4/92 UNDILUTED
RANGE: G 1,2855 LABEL: N 1, 3.0 QUAN: A 1, 0.1 J 0 BASE: U 20, 3
DATA: GR077484C21 #1
CALI: GR077484C21 #2
CS#17744-CHY11
SCANS 2040 TO 2070
OWA21
2052
8800.
72865.
benzo(b)fluor (pred @ 2051)
8800.
100.0
b(b)f: area counts = 147 x 112
= 16,464
Corrected area ≈ 72565 x (16464 - 5850) / 16464 =
47,000
Conc b(b)f = 47000 / 136203 x 20 / 1.436 = 4.81 ng
(pred b(k)fluor = 2057)
2056 - benzo(k)fluoranthene
b(k)f area counts = 90 x 65
= 5850
252
corr. area ≈ 25,900
conc b(k)f = 25,900 / 136203 x 20 / 1.178
= 3.23 ng
252.075
± 0.500
2040
16:48
2045
16:50
2050
53
2055
16:55
2060
58
2065
17:00
2070 SCAN
17:03 TIME
676
17744 CHY 11
SAMPLE DATA PACKAGE

52   583 CARBAZOLE
53   403 ANTHRACENE (Q4#8) <120-12-7>
54   426 DI-N-BUTYL PHTHALATE (Q4#9) <84-74-2>
55   431 FLUORANTHENE (Q4#10) <206-44-0>
56   *459 D12-CHRYSENE (IS#5)
57   445 PYRENE (Q5#3) <129-00-0>
58   415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59   423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60   405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61   413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62   418 CHRYSENE (Q5#8) <218-01-9>
63   *497 D12-PERYLENE (IS#6)
64   429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65   407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66   409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67   406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68   437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69   419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70   408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71   #619 2-FLUOROPHENOL (SS#1)
72   #612 D5-PHENOL (SS#2)
73   #634 2-CHLOROPHENOL-D4 (SS#3)
74   #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75   #447 D5-NITROBENZENE (SS#5)
76   #448 2-FLUOROBIPHENYL (SS#6)
77   #628 2,4,6-TRIBROMOPHENOL (SS#7)
78   #496 D14-TERPHENYL (SS#8)

CH914

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	178	1417 ✓	11:40	45	1.003	A BV	49724.	4.408	NG	0.85 YES
52	NOT FOUND									
53	178	1426 ✓	11:45	45	1.009	A VV	9048.	1.033	NG	0.20 YES
54	NOT FOUND									
55	202	1617	13:19	45	1.144	A BV	102051.	10.641	NG	2.04 YES
56	240	1861	15:20	56	1.000	A BB	193728.	20.000	NG	3.84 IS5
57	202	1655	13:38	56	0.889	A BB	82547.	6.041	NG	1.16 YES
58	149	1764	14:32	56	0.948	A BB	8308.	1.690	NG	0.32 YES
59	NOT FOUND									
60	228	1860	15:19	56	0.999	A*BV	66134 ~~100888.~~	5.639 ~~9.457~~	NG	1.82 YES
61	149	1863	15:21	56	1.001	A BB	53227.	4.728	NG	0.91 YES
62	228	1860	15:19	56	0.999	A*BV	56363 ~~100888.~~	4.512 ~~12.513~~	NG	2.40 YES
63	264	2136	17:35	63	1.000	A BB	136203.	20.000	NG	3.84 IS6
64	NOT FOUND									
65	252	2052	16:54	63	0.961	A BV	47000 ~~80828.~~	4.81 = 360 ug/kg ~~8.264~~	NG	1.59 YES II

SAMPLE DATA PACKAGE 17744 CHY 11 2/11/92 653

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
66	252	2056 ~~2052~~	16:54	63	0.961	A BV	25900 ~~80828.~~	3.23 = 240 ug/kg ~~10.079~~	NG	1.93 YES II
67	252	2123	17:29	63	0.994	A VV	31180.	4.863	NG	0.93 YES
68	276	2444	20:08	63	1.144	A BB	19004.	2.965	NG	0.57 YES
69	278	2451	20:11	63	1.147	A BB	6192.	1.044	NG	0.20 YES
70	276	2541	20:56	63	1.190	A*BB	15940.	2.588	NG	0.50 YES
71	112	500	4:07	1	0.735	A BV	339320.	51.877	NG	9.96
72	99	630	5:11	1	0.926	A BV	385783.	49.439	NG	9.49
73	132	648	5:20	1	0.953	A BB	255616.	40.251	NG	7.73
74	152	703	5:47	1	1.034	A BB	138600.	29.872	NG	5.73
75	82	765	6:18	13	0.872	A BB	310960.	37.287	NG	7.16
76	172	1054	8:41	26	0.905	A BB	351540.	31.838	NG	6.11
77	330	1296	10:40	26	1.112	A BB	77132.	29.455	NG	5.65
78	244	1682	13:51	56	0.904	A BB	328490.	39.468	NG	7.58

63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

STD 2/11

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1418	11:41	45	1.003	A BV	302272.	24.822 NG	1.33
52	167	1456	11:59	45	1.030	A BB	170508.	25.265 NG	1.35
53	178	1426	11:45	45	1.008	A VV	260924.	25.216 NG	1.35
54	149	1513	12:28	45	1.070	A BV	362744.	24.845 NG	1.33
55	202	1618	13:19	45	1.144	A BV	225092.	25.894 NG	1.38
56	240	1861	15:20	56	1.000	A BB	90116.	20.000 NG	1.07
57	202	1656	13:38	56	0.890	A BV	231136.	26.345 NG	1.41
58	149	1765	14:32	56	0.948	A BV	103288.	25.302 NG	1.35
59	252	1855	15:17	56	0.997	A BB	7964.	24.293 NG	1.30
60	228	1860	15:19	56	0.999	A BV	128244.	26.041 NG	1.39
61	149	1864	15:21	56	1.002	A BB	169928.	24.308 NG	1.30
62	228	1866	15:22	56	1.003	A VB	120264.	24.800 NG	1.33
63	264	2133	17:34	63	1.000	A BB	52960.	20.000 NG	1.07
64	149	1976	16:16	63	0.926	A BB	171824.	23.529 NG	1.26
65	252	2049	16:52	63	0.961	A BV	82496.	25.885 NG	1.38

IS 5

156

b(b)f

SAMPLE DATA PACKAGE

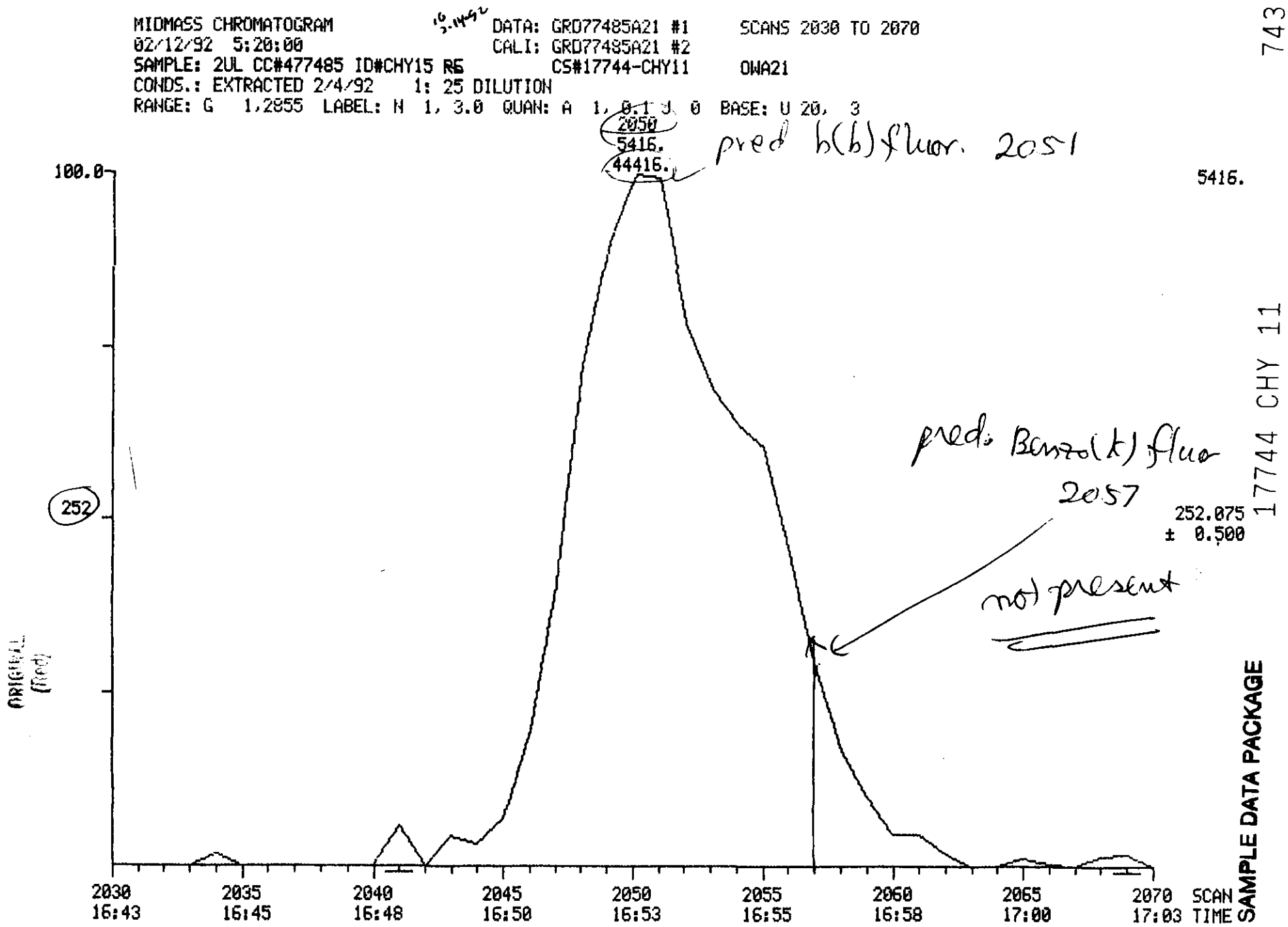
17744 CHY 11 1749

Quantitation Report File: HG920211B21

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66	252	2055	16:55	63	0.963	A VB	80580.	12.167 NG	0.65
67	252	2120	17:27	63	0.994	A BV	63072.	23.192 NG	1.24
68	276	2438	20:05	63	1.143	A BB	65380.	24.477 NG	1.31
69	278	2445	20:08	63	1.146	A BB	53460.	25.574 NG	1.37
70	276	2532	20:51	63	1.187	A BB	56044.	24.345 NG	1.30
71	112	495	4:05	1	0.728	A BV	170553.	24.080 NG	1.29
72	99	628	5:10	1	0.924	A BB	207764.	23.697 NG	1.27
73	132	647	5:20	1	0.951	A BB	164984.	24.038 NG	1.28
74	152	703	5:47	1	1.034	A BB	121528.	24.521 NG	1.31
75	82	765	6:18	13	0.871	A VB	226532.	23.483 NG	1.26
76	172	1055	8:41	26	0.905	A BB	285048.	25.934 NG	1.39
77	330	1296	10:40	26	1.111	A BB	33340.	28.782 NG	1.54
78	244	1682	13:51	56	0.904	A BV	133732.	26.487 NG	1.42

b(k)f

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:41	1.00	10.000	0.10	24.82	25.00	1.142	1.150	0.99
52	11:59	1.00	1.000	1.03	25.27	25.00	0.644	0.637	1.01
53	11:45	1.00	10.000	0.10	25.22	25.00	0.986	0.977	1.01
54	12:28	1.00	10.000	0.11	24.85	25.00	1.371	1.379	0.99
55	13:19	1.00	10.000	0.11	25.89	25.00	0.850	0.821	1.04
56	15:20	1.00	10.000	0.10	20.00	20.00	1.000	1.000	1.00
57	13:39	1.00	10.000	0.09	26.34	25.00	2.052	1.947	1.05


MIDMASS CHROMATOGRAM
02/12/92 5:20:00
SAMPLE: 2UL CC#477485 ID#CHY15 RE
CONDS.: EXTRACTED 2/4/92 1: 25 DILUTION
DATA: GRD77485A21 #1
CALI: GRD77485A21 #2
CS#17744-CHY11
SCANS 2030 TO 2070
OWA21
RANGE: G 1.2855 LABEL: N 1, 3.0 QUAN: A 1, 0.1 0 BASE: U 20, 3
2050
5416.
44416.
pred b(b)fluor. 2051
5416.
100.0
252
pred. Benzo(k) fluo
2057
252.075
± 0.500
not present
2030 16:43
2035 16:45
2040 16:48
2045 16:50
2050 16:53
2055 16:55
2060 16:58
2065 17:00
2070 17:03
SCAN
TIME
743
17744 CHY 11
SAMPLE DATA PACKAGE

58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY15

	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1417	11:40	45	1.002	A VV	34388.	2.902 NG	1.37 yes
52	167	1456	11:59	45	1.030	A BV	18256.	2.731 NG	1.29 NO
53	178	1427	11:45	45	1.009	A*VB	13574.	1.327 NG	0.63 NO
54	NOT FOUND								
55	202	1618	13:19	45	1.144	A BB	62086.	7.035 NG	3.32 yes
56	240	1861	15:20	56	1.000	A BV	122564.	20.000 NG	9.45 IS5
57	202	1657	13:39	56	0.890	A BB	60743.	4.831 NG	2.28 yes
58	NOT FOUND								
59	252	1858	15:18	56	0.998	A BV	3856.	8.900 NG	4.20 NO
60	228	~~1865~~	15:21	56	1.002	A*BB	20616 ~~49740.~~	2.956 ~~7.129~~ NG	3.37 yes
61	149	1864	15:21	56	1.002	A BV	11926.	1.290 NG	0.61 yes
62	228	1865	15:21	56	1.002	A*BB	24652 ~~49740.~~	3.767 ~~7.602~~ NG	3.59 yes
63	264	2133	17:34	63	1.000	A BV	91208.	20.000 NG	9.45 IS6
64	NOT FOUND								
65	252	2050	16:53	63	0.961	A BB	44416.	7.905 ~~7.816~~ NG	3.69 yes

= 7800 ug/kg

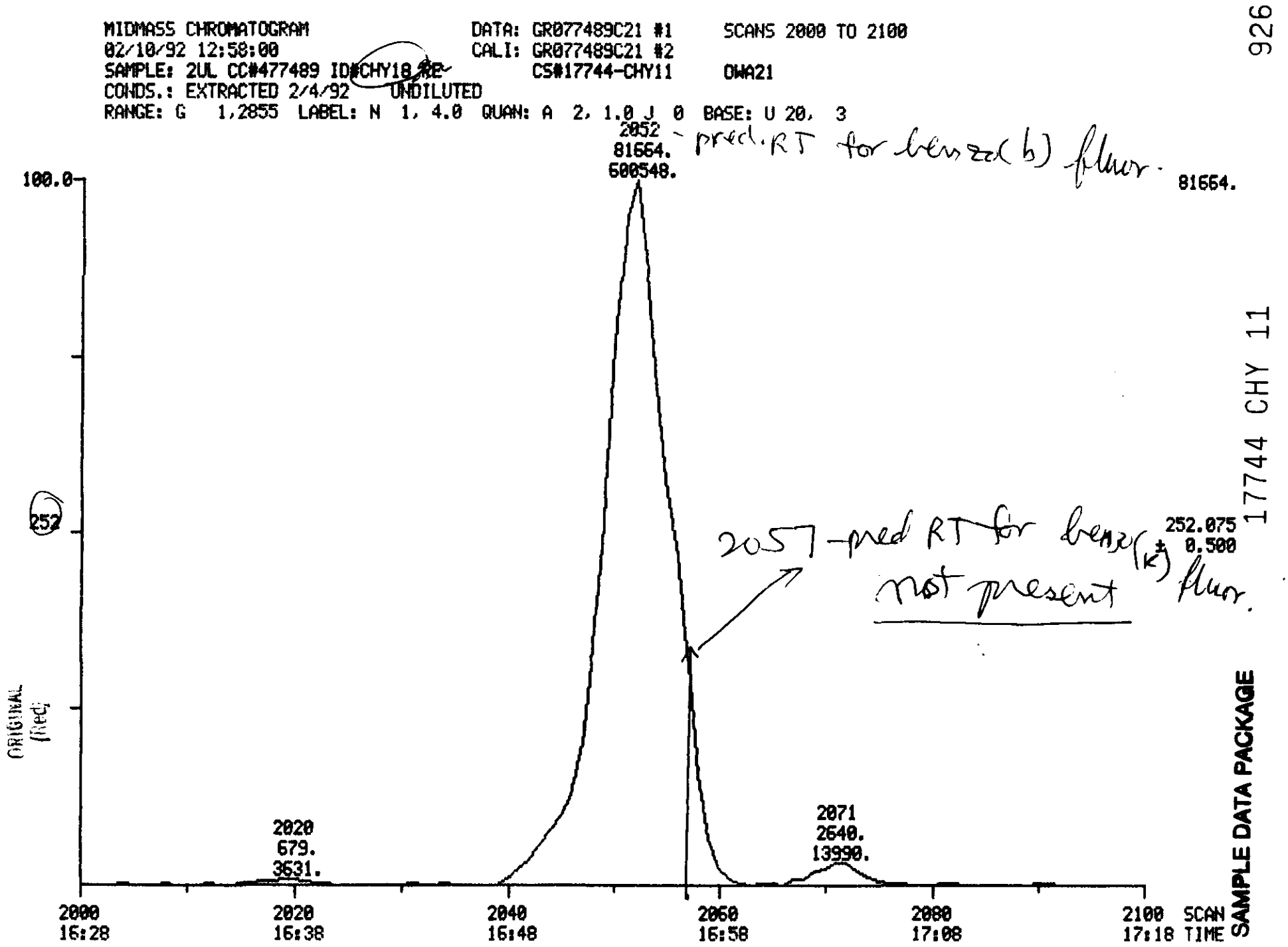
1604
7/22/92

SAMPLE DATA PACKAGE

17744 CHY 11

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
~~66~~	~~252~~	~~2050~~	~~16:53~~	~~63~~	~~0.961~~	~~A BB~~	~~44416.~~ 7.905	~~8.001 NG~~	~~3.78~~ yes NO
67	252	2120	17:27	63	0.994	A VB	15892.	3.658 NG	1.73 yes
68	276	2441	20:06	63	1.144	A BV	10664.	2.368 NG	1.12 yes
69	NOT FOUND								
70	276	2532	20:51	63	1.187	A*BV	8184.	2.120 NG	1.00 yes
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	330	1297	10:41	26	1.114	A BB	2328.	1.925 NG	0.91
78	244	1682	13:51	56	0.904	A BB	12660.	1.740 NG	0.82

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:41	1.00	10.000	0.10	2.90	25.00	0.133	1.142	0.12
52	11:59	1.00	1.000	1.03	2.73	25.00	0.070	0.644	0.11
53	11:45	1.00	10.000	0.10	1.33	25.00	0.052	0.986	0.05
54	12:28		10.000						


MIDMASS CHROMATOGRAM
02/10/92 12:58:00
SAMPLE: 2UL CC#477489 ID#CHY18RE
CONDS.: EXTRACTED 2/4/92 UNDILUTED
RANGE: G 1,2855 LABEL: N 1, 4.0 QUAN: A 2, 1.0 J 0 BASE: U 20, 3
DATA: GR077489C21 #1 SCANS 2000 TO 2100
CALI: GR077489C21 #2
CS#17744-CHY11 OWA21
926
17744 CHY 11
SAMPLE DATA PACKAGE
2052
81664.
600548.
pred. RT for benzo(b) fluor.
81664.
100.0
252
252.075
0.500
2057 - pred RT for benzo(k) fluor.
not present
2020
679.
3631.
2071
2640.
13990.
2000
16:28
2020
16:38
2040
16:48
2060
16:58
2080
17:08
2100
17:18
SCAN
TIME
ORIGINAL
(Red)

67 408 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY18 mtd

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	178	1416	11:40	45	1.003	A BV	341736.	27.221	NG	2.94 yes
52	167	1453	11:58	45	1.029	A VB	32036.	3.924	NG	0.42 yes
53	178	1425	11:44	45	1.009	A VV	32672.	2.962	NG	0.32 yes
54	NOT FOUND									
55	202	1618	13:19	45	1.146	A BB	795781.	~80.740	NG	8.73 yes E
56	240	1861	15:20	56	1.000	A BB	189320.	20.000	NG	2.16
57	202	1656	13:38	56	0.890	A BB	732198.	58.935	NG	6.37 yes
58	NOT FOUND									
59	NOT FOUND									
60	228	1859	15:19	56	0.999	A BV	348068.	36.564	NG	3.95 yes
61	149	1862	15:20	56	1.001	A BB	13272.	1.691	NG	0.18 No
62	228	1865	15:21	56	1.002	A VV	308040.	34.900	NG	3.77 yes
63	264	2134	17:34	63	1.000	A BB	98796.	20.000	NG	2.16
64	NOT FOUND									
65 de	252	2052	16:54	63	0.962	A BV	600518 ~~625398.~~	94.650 ~~91.905~~	NG	9.94 yes

4100 ug/kg

SAMPLE DATA PACKAGE 17744 CHY 11

9030

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
~~66~~	~~252~~	~~2052~~	~~16:54~~	~~63~~	~~0.962~~	~~A BV~~	~~[illegible]~~	~~[illegible]~~	~~NG~~	~~[illegible]~~ yes
67	252	2122	17:28	63	0.994	A VB	137591.	26.938	NG	2.91 yes
68	276	2442	20:07	63	1.144	A BB	123538.	21.525	NG	2.33 yes
69	~~NOT FOUND~~ 278	2498					36183 ~~24214~~	7.630 ~~6.160~~		yes
70	276	2536	20:53	63	1.188	A BB	101238.	20.881	NG	2.26 yes
71	112	499	4:07	1	0.734	A BB	166604.	36.171	NG	3.91
72	99	629	5:11	1	0.925	A BV	241168.	44.336	NG	4.79
73	132	648	5:20	1	0.953	A BV	167116.	31.390	NG	3.39
74	152	703	5:47	1	1.034	A BB	116704.	31.701	NG	3.43
75	82	764	6:17	13	0.871	A BV	214856.	39.569	NG	4.28
76	172	1053	8:40	26	0.905	A BB	371204.	32.096	NG	3.47
77	330	1295	10:40	26	1.113	A BB	27776.	13.530	NG	1.46
78	244	1681	13:51	56	0.903	A BB	337416.	39.662	NG	4.29

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:42	1.00	10.000	0.10	27.22	25.00	1.251	1.149	1.09
52	12:00	1.00	1.000	1.03	3.92	25.00	0.117	0.747	0.16
53	11:47	1.00	10.000	0.10	2.96	25.00	0.120	1.010	0.12
54	12:29		10.000						
55	13:21	1.00	10.000	0.11	80.74	25.00	2.914	0.902	3.23
56	15:21	1.00	10.000	0.10	20.00	20.00	1.000	1.000	1.00
57	13:40	1.00	10.000	0.09	58.94	25.00	3.094	1.312	2.36
58	14:34		10.000						
59	15:18		20.000						
60	15:21	1.00	10.000	0.10	36.56	25.00	1.471	1.006	1.46
61	15:22	1.00	10.000	0.10	1.69	25.00	0.056	0.829	0.07
62	15:23	1.00	10.000	0.10	34.90	25.00	1.302	0.932	1.40
63	17:36	1.00	10.000	0.10	20.00	20.00	1.000	1.000	1.00
64	16:17		10.000						
65	16:55	1.00	10.000	0.10	[illegible]	[illegible]			

MIDMASS CHROMATOGRAM DATA: GDJ77489A21 #1 SCANS 2015 TO 2125
02/12/92 20:55:00 CALI: GDJ77489A21 #2
SAMPLE: 2UL CC#477489 ID#CHY18 RE CS#17744-CHY11 OWA21
CONDS.: EXTRACTED 2/4/92 1: 2 DILUTION
RANGE: G 1,2855 LABEL: N 1, 3.0 QUAN: A 1, 0.3 J 0 BASE: U 20, 3

995

2030
25216.
186900.

pred. RT for benzo(b) fluor.

100.0

25216.

pred RT for benzo(k) = 2035

not present

252

2087
12000.
66210.

2098
11792.
67396.

252.075
± 0.500

17744 CHY 11

2050
1918.
10520.

2117
3292.
18464.

2020 16:38 | 2040 16:48 | 2060 16:58 | 2080 17:08 | 2100 17:18 | 2120 17:27 SCAN TIME

SAMPLE DATA PACKAGE

58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CN418DL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1401	11:32	45	1.003	A BV	170436.	14.871 NG	2.43 yes
52	167	1438	11:51	45	1.029	A BB	23228.	2.845 NG	0.47 yes
53	178	1409	11:36	45	1.009	A VV	25788.	2.586 NG	0.42 yes
54	NOT FOUND								
55	202	1601	13:11	45	1.146	A BV	358208.	42.890 NG	7.02 yes
56	240	1844	15:11	56	1.000	A BB	85720.	20.000 NG	3.27 IS5
57	202	1639	13:30	56	0.889	A BB	304797.	36.168 NG	5.92 yes
58	NOT FOUND								
59	NOT FOUND								
60	228	1842	15:10	56	0.999	A BV	91680.	18.580 NG	3.04 yes
61	149	1848	15:13	56	1.002	A BB	15852.	2.328 NG	0.38 NO
62	228	1848	15:13	56	1.002	A VV	109664.	22.520 NG	3.68 yes
63	264	2110	17:23	63	1.000	A BV	64684.	20.000 NG	3.27 IS6
64	NOT FOUND								
65	252	2030	16:43	63	0.962	A BV	~~[illegible]~~ 47.9[illegible]	~~50.811~~ NG	8.23 yes

= 4500 ug/kg

969

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
~~66~~	~~252~~	~~2090~~	~~[illegible]~~	~~63~~	~~0.962~~	~~A BV~~	~~[illegible]~~	~~[illegible]~~ NG	~~7.50~~ yes
67	252	2098	17:17	63	0.994	A VV	68668.	20.655 NG	3.38 yes
68	276	2408	19:50	63	1.141	A BB	69357 ~~79212.~~ 19.073	~~21.777~~ NG	3.56 yes
69	278	2414	19:53	63	1.144	A VB	19089 ~~26772.~~ 6.458	~~9.055~~ NG	1.48 yes
70	276	2501	20:36	63	1.185	A BB	65400 ~~72032.~~ 20.221	~~22.275~~ NG	3.64 yes
71	112	483	3:59	1	0.725	A BB	116756.	25.493 NG	4.17
72	99	615	5:04	1	0.923	A BB	148084.	25.814 NG	4.22
73	132	633	5:13	1	0.950	A BB	110520.	20.585 NG	3.37
74	152	688	5:40	1	1.033	A BB	60392.	16.950 NG	2.77
75	82	750	6:11	13	0.869	A BB	126120.	20.927 NG	3.42
76	172	1039	8:33	26	0.904	A BB	173808.	18.830 NG	3.08
77	330	1280	10:32	26	1.114	A BB	27244.	17.129 NG	2.80
78	244	1665	13:43	56	0.903	A BB	126276.	22.799 NG	3.73

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:35	1.00	10.000	0.10	14.87	25.00	0.681	1.144	0.59
52	11:53	1.00	1.000	1.03	2.84	25.00	0.093	0.815	0.11
53	11:39	1.00	10.000	0.10	2.59	25.00	0.103	0.996	0.10
54	12:22		10.000						
55	13:14	1.00	10.000	0.11	42.89	25.00	1.431	0.834	1.72

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

	EPA SAMPLE NO.	EPA SAMPLE NO.
	CHY18	CHY18DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11 SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489 : 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077489C21 GDJ77489A21

Level: (low/med) LOW Date Received: 01/29/92 : 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92 d: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92 : 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0 or: 2.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	TS: G/KG	Q
108-95-2	Phenol	450	U	900	U
111-44-4	bis(2-Chloroethyl)Ether	450	U	900	U
95-57-8	2-Chlorophenol	450	U	900	U
541-73-1	1,3-Dichlorobenzene	450	U	900	U
106-46-7	1,4-Dichlorobenzene	450	U	900	U
95-50-1	1,2-Dichlorobenzene	450	U	900	U
95-48-7	2-Methylphenol	450	U	900	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	450	U	900	U
106-44-5	4-Methylphenol	450	U	900	U
621-64-7	N-Nitroso-Di-n-Propylamine	450	U	900	U
67-72-1	Hexachloroethane	450	U	900	U
98-95-3	Nitrobenzene	450	U	900	U
78-59-1	Isophorone	450	U	900	U
88-75-5	2-Nitrophenol	450	U	900	U
105-67-9	2,4-Dimethylphenol	450	U	900	U
111-91-1	bis(2-Chloroethoxy)Methane	450	U	900	U
120-83-2	2,4-Dichlorophenol	450	U	900	U
120-82-1	1,2,4-Trichlorobenzene	450	U	900	U
91-20-3	Naphthalene	450	U	900	U
106-47-8	4-Chloroaniline	450	U	900	U
87-68-3	Hexachlorobutadiene	450	U	900	U
59-50-7	4-Chloro-3-Methylphenol	450	U	900	U
91-57-6	2-Methylnaphthalene	450	U	900	U
77-47-4	Hexachlorocyclopentadiene	450	U	900	U
88-06-2	2,4,6-Trichlorophenol	450	U	900	U
95-95-4	2,4,5-Trichlorophenol	1100	U	2200	U
91-58-7	2-Chloronaphthalene	450	U	900	U
88-74-4	2-Nitroaniline	1100	U	2200	U
131-11-3	Dimethyl Phthalate	450	U	900	U
208-96-8	Acenaphthylene	450	U	900	U
606-20-2	2,6-Dinitrotoluene	450	U	900	U
99-09-2	3-Nitroaniline	1100	U	2200	U
83-32-9	Acenaphthene	89	J ✓	110	DJ

all surr recovered in both (except TPP in initial anal) 895

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

	EPA SAMPLE NO.	EPA SAMPLE NO.
	CHY18	CHY18DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11 SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489 : 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077489C21 GDJ77489A21

Level: (low/med) LOW Date Received: 01/29/92 : 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92 ed: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92 : 02/12/92

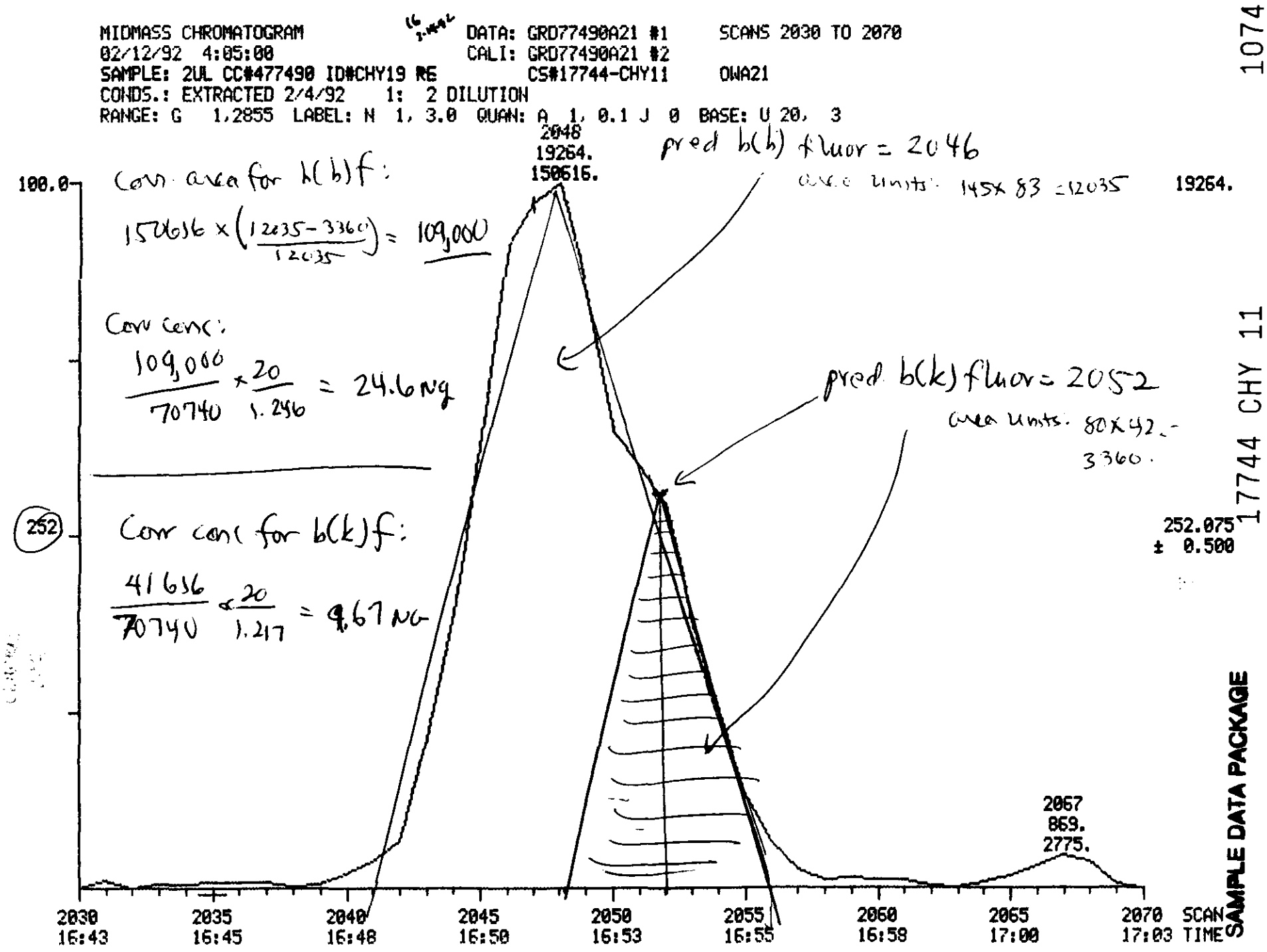
Injection Volume: 2.0(uL) Dilution Factor: 1.0 or: 2.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q		TS: UG/KG	Q	
51-28-5	2,4-Dinitrophenol	1100	U		2200	U	
100-02-7	4-Nitrophenol	1100	U	IL	2200	U	
132-64-9	Dibenzofuran	450	U		900	U	
121-14-2	2,4-Dinitrotoluene	450	U		900	U	
84-66-2	Diethylphthalate	450	U	ND	390	DJ	
7005-72-3	4-Chlorophenyl-phenylether	450	U		900	U	
86-73-7	Fluorene	66	J	1.5	92	DJ	
100-01-6	4-Nitroaniline	1100	U		2200	U	
534-52-1	4,6-Dinitro-2-Methylphenol	1100	U		2200	U	
86-30-6	N-Nitrosodiphenylamine (1)	450	U		900	U	
101-55-3	4-Bromophenyl-phenylether	450	U		900	U	
118-74-1	Hexachlorobenzene	450	U		900	U	
87-86-5	Pentachlorophenol	1100	U		2200	U	
85-01-8	Phenanthrene	1200			1400	D	
120-12-7	Anthracene	140	J	3.1	240	DJ	
86-74-8	Carbazole	180	J	4.0	260	DJ	
84-74-2	Di-n-Butylphthalate	450	U		900	U	
206-44-0	Fluoranthene	3700	E		3900	D	
129-00-0	Pyrene	2700			3300	D	
85-68-7	Butylbenzylphthalate	450	U		900	U	
91-94-1	3,3'-Dichlorobenzidine	450	U		900	U	
56-55-3	Benzo(a)Anthracene	1700			1700	D	
218-01-9	Chrysene	1600			2100	D	
117-81-7	bis(2-Ethylhexyl)Phthalate	450	U		900	U	
117-84-0	Di-n-Octyl Phthalate	450	U		900	U	
205-99-2	Benzo(b)Fluoranthene	4100 ~~4600~~	~~BK~~		450 ~~4400~~	~~BK~~	
207-08-9	Benzo(k)Fluoranthene	450 ~~4600~~	~~BK~~		900 ~~4400~~	~~BK~~	
50-32-8	Benzo(a)Pyrene	1200			1900	D	
193-39-5	Indeno(1,2,3-cd)Pyrene	980			1700	D	
53-70-3	Dibenz(a,h)Anthracene	350	J	7.3	590	DJ	
191-24-2	Benzo(g,h,i)Perylene	950			1800	D	

(1) - Cannot be separated from Diphenylamine

TRPH surr vac goop 3/90


MIDMASS CHROMATOGRAM
02/12/92 4:05:00
SAMPLE: 2UL CC#477490 ID#CHY19 RE
CONDS.: EXTRACTED 2/4/92 1: 2 DILUTION
RANGE: G 1.2855 LABEL: N 1, 3.0 QUAN: A 1, 0.1 J 0 BASE: U 20, 3
DATA: GRD77490A21 #1 SCANS 2030 TO 2070
CALI: GRD77490A21 #2
CS#17744-CHY11 OWA21
1074
17744 CHY 11
SAMPLE DATA PACKAGE
2048
19264.
150616.
19264.
100.0
Conv area for b(b)f:
150616 x (12035-3360)/12035 = 109,000
Conv conc:
109,000/70740 x 20/1.246 = 24.6 ng
pred b(b) fluor = 2046
area units: 145x83 = 12035
pred b(k) fluor = 2052
area units: 80x42 = 3360.
252
Conv conc for b(k)f:
41656/70740 x 20/1.217 = 9.67 ng
252.075
± 0.500
2067
869.
2775.
2030 16:43
2035 16:45
2040 16:48
2045 16:50
2050 16:53
2055 16:55
2060 16:58
2065 17:00
2070 17:03
SCAN
TIME

55 431 FLUORANTHENE (Q4#10) <206-44-0>
56 *459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY 19

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot	
51	178	1413 ✓	11:38	45	1.003	A BV	219332.	26.919 NG	5.07 yes	
52	167	1450	11:56	45	1.029	A BB	17400.	3.786 NG	0.71 yes	
53	178	1422 ✓	11:43	45	1.009	A VV	36232.	5.151 NG	0.97 yes	
54	NOT FOUND									
55	202	1614 ✓	13:17	45	1.145	A BV	284737.	46.929 NG	8.84 yes	
56	240	(1857)	15:18	56	1.000	A BB	96780.	20.000 NG	3.77	155
57	202	1652 ✓	13:36	56	0.890	A BB	228605.	23.024 NG	4.34 yes	
58	NOT FOUND									
59	NOT FOUND									
60	228	1856 ✓	15:17	56	0.999	A BV	87168.	15.823 NG	2.98 yes	
61	NOT FOUND									
62	228	1862 ✓	15:20	56	1.003	A VV	91120.	17.637 NG	3.32 yes	
63	264	(2130)	17:32	63	1.000	A BV	70740.	20.000 NG	3.77	156
64	NOT FOUND									
65	252	2048	16:52	63	0.962	A BV	~~152766.~~ 109,000	~~[illegible]~~ 24.6 NG	6.53 yes	

x86 = 2100 ug/kg

SAMPLE DATA PACKAGE 17744 CHY 11 1044-1442

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66	252	~~2048~~ 2052	16:52	63	0.962	A BV	~~152766.~~ 41616	~~28.488~~ 9.67 NG (x86 = 830 ug/kg)	6.68 yes
67	252	2118	17:27	63	0.994	A VV	60634.	17.993 NG	3.39 yes
68	276	2438	20:05	63	1.145	A BB	43772.	12.531 NG	2.36 yes
69	278	2448	20:10	63	1.149	A BV	13217.	4.627 NG	0.87 yes
70	276	2533	20:52	63	1.189	A VB	34592.	11.552 NG	2.18 yes
71	112	492	4:03	1	0.729	A BB	87308.	19.269 NG	3.63
72	99	625	5:09	1	0.926	A BV	133016.	24.099 NG	4.54
73	132	643	5:18	1	0.953	A BB	71104.	16.223 NG	3.06
74	152	698	5:45	1	1.034	A BB	52036.	16.118 NG	3.04
75	82	760	6:16	13	0.871	A BB	108228.	19.237 NG	3.62
76	172	1050	8:39	26	0.904	A BB	140344.	17.799 NG	3.35
77	330	1293	10:39	26	1.114	A BB	7336.	7.955 NG	1.50
78	244	1678	13:49	56	0.904	A BB	95012.	16.539 NG	3.12

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:41	1.00	10.000	0.10	26.92	25.00	1.230	1.142	1.08
52	11:59	1.00	1.000	1.03	3.79	25.00	0.098	0.644	0.15

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

	EPA SAMPLE NO.	EPA SAMPLE NO.
	CHY20	CHY20DL

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11 SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491 ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77491C21 : GDJ77491A21

Level: (low/med) LOW Date Received: 01/29/92 ed: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92 ted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92 ed: 02/13/92

Injection Volume: 2.0(uL) Dilution Factor: 15.0 ctor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q		NITS: UG/KG	Q
51-28-5	2,4-Dinitrophenol	18000	U	EL	36000	U
100-02-7	4-Nitrophenol	18000	U		36000	U
132-64-9	Dibenzofuran	2900	J	3.4	3100	DJ
121-14-2	2,4-Dinitrotoluene	7500	U		15000	U
84-66-2	Diethylphthalate	7500	U		3000	DJB
7005-72-3	4-Chlorophenyl-phenylether	7500	U		15000	U
86-73-7	Fluorene	4100	J	5.5	4900	DJ
100-01-6	4-Nitroaniline	18000	U		36000	U
534-52-1	4,6-Dinitro-2-Methylphenol	18000	U		36000	U
86-30-6	N-Nitrosodiphenylamine (1)	7500	U		15000	U
101-55-3	4-Bromophenyl-phenylether	7500	U		15000	U
118-74-1	Hexachlorobenzene	7500	U		15000	U
87-86-5	Pentachlorophenol	18000	U		36000	U
85-01-8	Phenanthrene	75000	E		52000	D
120-12-7	Anthracene	14000			13000	DJ
86-74-8	Carbazole	11000			7900	DJ
84-74-2	Di-n-Butylphthalate	7500	U		15000	U
206-44-0	Fluoranthene	110000	E		72000	D
129-00-0	Pyrene	51000			54000	D
85-68-7	Butylbenzylphthalate	7500	U		15000	U
91-94-1	3,3'-Dichlorobenzidine	7500	U		15000	U
56-55-3	Benzo(a)Anthracene	33000			29000	D
218-01-9	Chrysene	32000			27000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	1600	JB		2600	DJB
117-84-0	Di-n-Octyl Phthalate	7500	U		15000	U
205-99-2	Benzo(b)Fluoranthene	46000 ~~65000~~	~~E~~		36,000 ~~46000~~	DE
207-08-9	Benzo(k)Fluoranthene	15000 ~~65000~~	~~E~~		9700 ~~46000~~	DEJ
50-32-8	Benzo(a)Pyrene	30000			24000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	11000			15000	D
53-70-3	Dibenz(a,h)Anthracene	5300	J	(7.1)EL	6000	DJ
191-24-2	Benzo(g,h,i)Perylene	7600			13000	DJ

(1) - Cannot be separated from Diphenylamine

1B

: ORGANICS ANALYSIS DATA SHEET

	EPA SAMPLE NO.	EPA SAMPLE NO.
	CHY20	CHY20DL

'P _____ Contract: 68D10083

ase No.: 17744 SAS No.: 6579HQ SDG No.: CHY11 SDG No.: CHY11

OIL Lab Sample ID: 477491 ID: 477491

30.5 (g/mL) G Lab File ID: GRD77491C21 : GDJ77491A21

LOW Date Received: 01/29/92 ed: 01/29/92

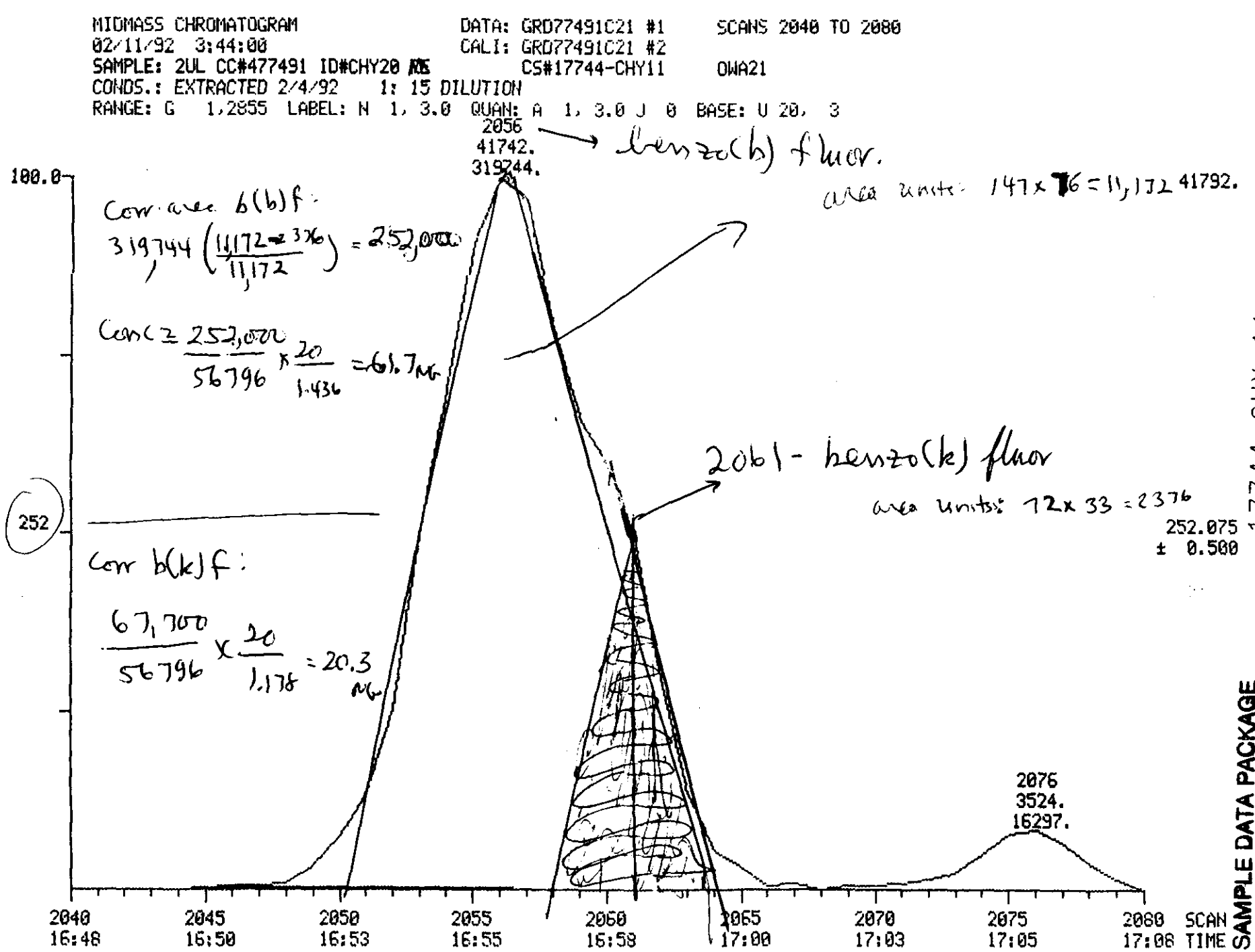
ecanted: (Y/N) N Date Extracted: 02/04/92 ted: 02/04/92

Volume: 500.0 (uL) Date Analyzed: 02/11/92 ed: 02/13/92

2.0(uL) Dilution Factor: 15.0 ctor: 30.0

Y pH: 6.7

COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q		NITS: UG/KG	Q	
-Phenol	7500	U		15000	U	
-bis(2-Chloroethyl)Ether	7500	U		15000	U	
--2-Chlorophenol	7500	U		15000	U	
-1,3-Dichlorobenzene	7500	U		15000	U	
-1,4-Dichlorobenzene	7500	U		15000	U	
--1,2-Dichlorobenzene	7500	U		15000	U	
--2-Methylphenol	7500	U		15000	U	
-2,2'-Oxybis(1-Chloropropane)	7500	U		15000	U	
-4-Methylphenol	7500	U		15000	U	
--N-Nitroso-Di-n-Propylamine	7500	U		15000	U	
-Hexachloroethane	7500	U		15000	U	
Nitrobenzene	7500	U		15000	U	
sophorone	7500	U		15000	U	
--2-Nitrophenol	7500	U		15000	U	
-2,4-Dimethylphenol	7500	U		15000	U	
-bis(2-Chloroethoxy)Methane	7500	U		15000	U	
--2,4-Dichlorophenol	7500	U		15000	U	
--1,2,4-Trichlorobenzene	7500	U	IL	15000	U	
-Naphthalene	2500	J ✓	3.33	2700	DJ	IL 1.5
-4-Chloroaniline	7500	U		15000	U	
--Hexachlorobutadiene	7500	U		15000	U	
-4-Chloro-3-Methylphenol	7500	U		15000	U	
-2-Methylnaphthalene	790	J ✓		15000	U	
--Hexachlorocyclopentadiene	7500	U		15000	U	
--2,4,6-Trichlorophenol	7500	U		15000	U	
-2,4,5-Trichlorophenol	18000	U		36000	U	
-2-Chloronaphthalene	7500	U		15000	U	
--2-Nitroaniline	18000	U		36000	U	
-Dimethyl Phthalate	7500	U		15000	U	
-Acenaphthylene	7500	U		15000	U	
--2,6-Dinitrotoluene	7500	U		15000	U	
--3-Nitroaniline	18000	U		36000	U	
-Acenaphthene	9000	✓		10000	DJ	


MIDMASS CHROMATOGRAM
02/11/92 3:44:00
SAMPLE: 2UL CC#477491 ID#CHY20
CONDS.: EXTRACTED 2/4/92 1: 15 DILUTION
RANGE: G 1,2855 LABEL: N 1, 3.0 QUAN: A 1, 3.0 J 0 BASE: U 20, 3
DATA: GRD77491C21 #1
CALI: GRD77491C21 #2
CS#17744-CHY11
SCANS 2040 TO 2080
OWA21
1148
17744 CHY 11
SAMPLE DATA PACKAGE
2056
41742.
319744.
benzo(b) fluor.
area units: 147 x 76 = 11,172 41792.
Corr area b(b)f:
319,744 (11,172 - 376 / 11,172) = 252,000
Conc = 252,000 / 56796 x 20 / 1.436 = 61.7 ng
2061 - benzo(k) fluor
area units: 72 x 33 = 2376
252.075
± 0.500
252
Corr b(k)f:
67,700 / 56796 x 20 / 1.178 = 20.3 ng
2076
3524.
16297.
100.0
2040 16:48
2045 16:50
2050 16:53
2055 16:55
2060 16:58
2065 17:00
2070 17:03
2075 17:05
2080 17:08
SCAN
TIME

56 #459 D12-CHRYSENE (IS#5)
57 445 PYRENE (Q5#3) <129-00-0>
58 415 BUTYLBENZYL PHTHALATE (Q5#4) <85-68-7>
59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 #497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CN920.

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	178	1420	11:42	45	1.004	A BV	733607.	99.416	NG	11.72
52	167	1455	11:59	45	1.028	A BV	53628.	14.904	NG	1.76
53	178	1428	11:46	45	1.009	A VV	108429.	18.923	NG	2.23
54	NOT FOUND									
55	202	1621	13:21	45	1.146	A BB	912634.	145.471	NG	17.15
56	240	1864	15:21	56	1.000	A BV	155836.	20.000	NG	2.36
57	202	1660	13:40	56	0.891	A BB	741494.	67.456	NG	7.95
58	NOT FOUND									
59	NOT FOUND									
60	228	1863	15:21	56	0.999	A BV	372047.	43.356	NG	5.11
61	149	1865	15:21	56	1.001	A BB	18959.	2.094	NG	0.25
62	228	1869	15:23	56	1.003	A VV	274026.	42.252	NG	4.98
63	264	2139	17:37	63	1.000	A BV	56796.	20.000	NG	2.36
64	NOT FOUND									
65	252	2056	16:56	63	0.961	A BV	~~382987.~~ 252,000	~~81.647~~ 61.7	NG	9.62

IS 5

IS 6

46,000 ng/kg

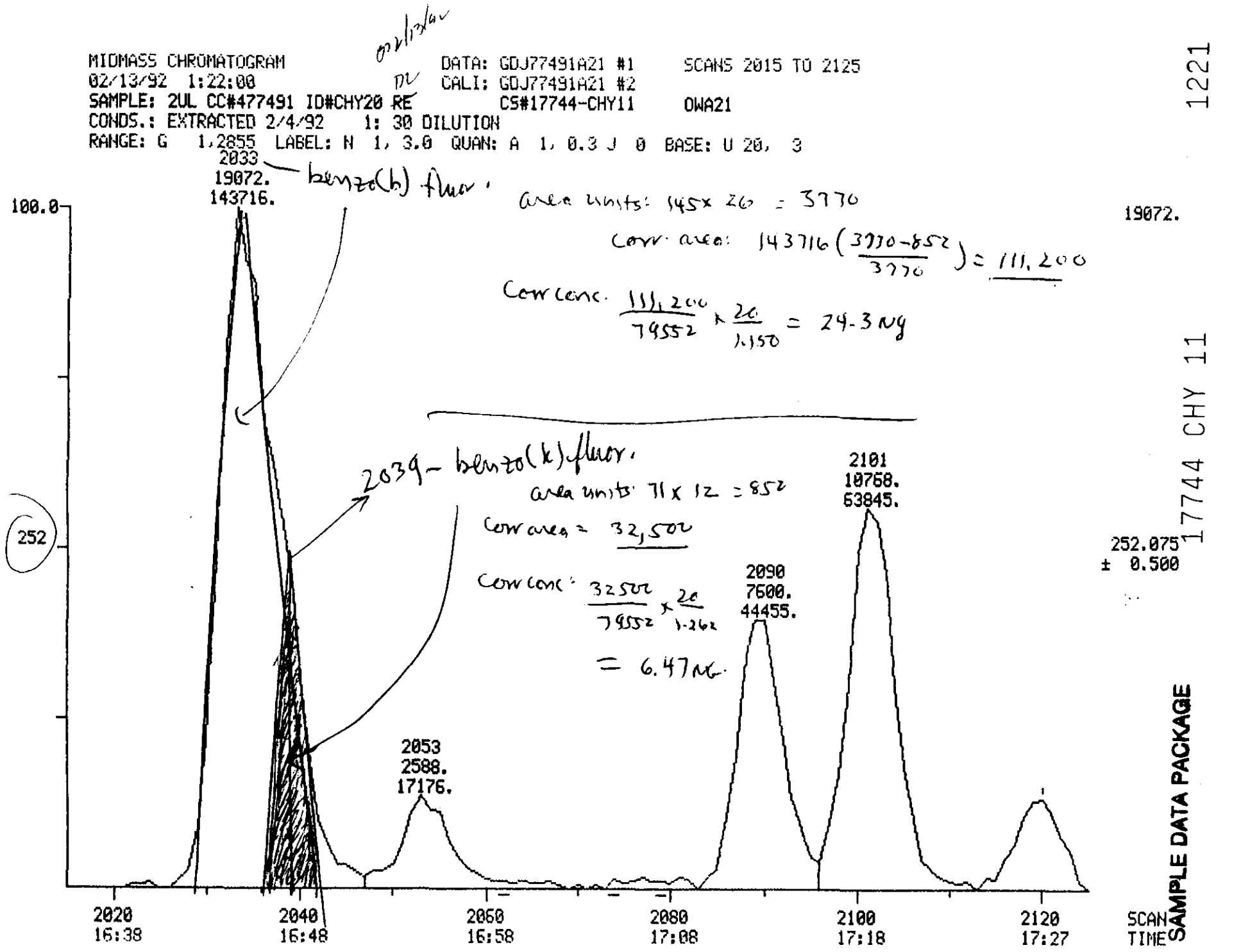
SAMPLE DATA PACKAGE

17744 CHY 11

1116

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
66	252	~~2056~~ 2061	16:56	63	0.961	A BV	~~332787.~~ 67702	~~82.580~~ 20.3 = 15,200 ng/kg	NG	11.74
67	252	2127	17:31	63	0.994	A VV	107344.	40.150	NG	4.73
68	276	2451	20:11	63	1.146	A BB	37493.	14.028	NG	1.65
69	278	2457	20:14	63	1.149	A BB	17340.	7.013	NG	0.83
70	276	2544	20:57	63	1.189	A BB	25652.	9.986	NG	1.18
71	112	499	4:07	1	0.732	A BV	11704.	3.325	NG	0.39
72	99	632	5:12	1	0.927	A BV	9492.	2.260	NG	0.27
73	132	650	5:21	1	0.953	A BB	7612.	2.227	NG	0.26
74	152	705	5:48	1	1.034	A BB	4540.	1.818	NG	0.21
75	82	767	6:19	13	0.873	A BV	6876.	1.487	NG	0.18
76	172	1056	8:42	26	0.905	A BB	12948.	1.982	NG	0.23
77	330	1299	10:42	26	1.113	A BB	2116.	1.366	NG	0.16
78	244	1684	13:52	56	0.903	A BB	14052.	2.099	NG	0.25

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:42	1.00	10.000	0.10	99.42	25.00	4.449	1.119	3.98
52	12:01	1.00	1.000	1.03	14.90	25.00	0.325	0.546	0.60
53	11:47	1.00	10.000	0.10	18.92	25.00	0.412	0.546	0.75


MIDMASS CHROMATOGRAM
02/13/92 1:22:00
SAMPLE: 2UL CC#477491 ID#CHY20 RE
CONDS.: EXTRACTED 2/4/92 1: 30 DILUTION
RANGE: G 1.2855 LABEL: N 1, 3.0 QUAN: A 1, 0.3 J 0 BASE: U 20, 3
DATA: GDJ77491A21 #1 SCANS 2015 TO 2125
CALI: GDJ77491A21 #2
CS#17744-CHY11 OWA21
1221
17744 CHY 11
SAMPLE DATA PACKAGE
2033
19072.
143716.
benzo(b) fluor.
area units: 145 x 26 = 3770
Corr. area: 143716 (3770-852/3770) = 111,200
Corr conc. 111,200/79552 x 20/1.150 = 24.3 ng
2039 - benzo(k)fluor.
area units: 71 x 12 = 852
Corr area = 32,502
Corr conc: 32502/79552 x 20/1.262
= 6.47 ng.
2053
2588.
17176.
2090
7600.
44455.
2101
10768.
63845.
100.0
252
19072.
252.075
± 0.500
2020
16:38
2040
16:48
2060
16:58
2080
17:08
2100
17:18
2120
17:27
SCAN
TIME

[illegible]
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY20 DL

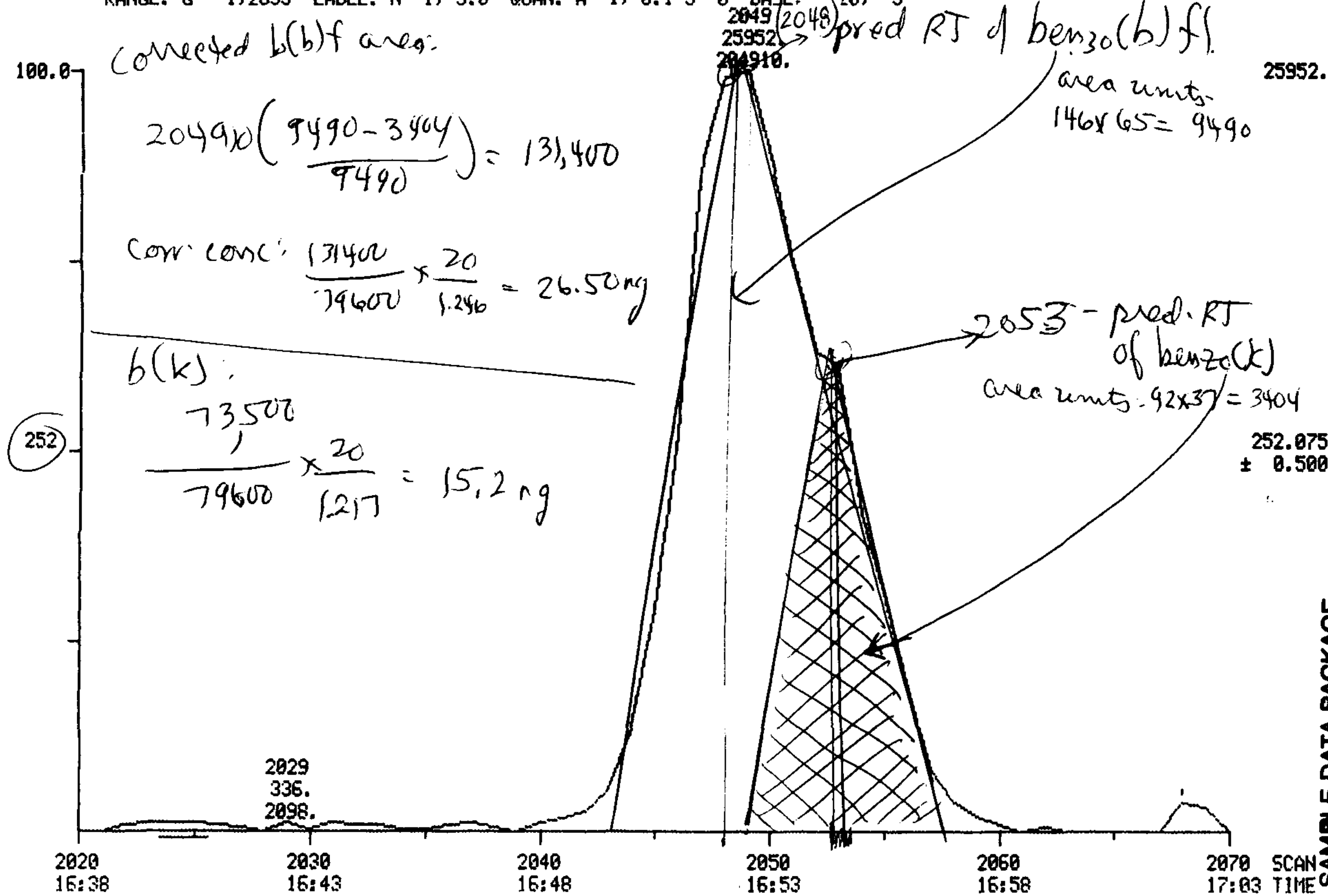
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1405	11:34	45	1.003	A BV	469228.	34.065 NG	8.24 Y D
52	167	1442	11:52	45	1.029	A BB	51260.	5.223 NG	1.26 Y D
53	178	1413	11:38	45	1.009	A VB	106808.	8.912 NG	2.16 Y D
54	NOT FOUND								
55	202	1605	13:13	45	1.146	A BB	477180.	47.539 NG	11.50 Y D
56	240	1848	15:13	56	1.000	A BB	105528.	20.000 NG	4.84 IS5
57	202	1643	13:32	56	0.889	A BB	370408.	35.704 NG	8.63 Y D
58	149	1753	14:26	56	0.949	A BB	6680.	1.211 NG	0.29 N
59	NOT FOUND								
60	228	1846	15:12	56	0.999	A BV	116968.	19.256 NG	4.66 Y D
61	149	1851	15:15	56	1.002	A BB	14408.	1.719 NG	0.42 Y D
62	228	1852	15:15	56	1.002	A VV	105604.	17.615 NG	4.26 Y D
63	264	2113	17:24	63	1.000	A BB	79552.	20.000 NG	4.84 IS6
64	NOT FOUND								
65	252	2033	16:45	63	0.962	A BV	~~142028.~~ 111,200	~~31.229~~ NG 24.3×1500 = 36,500 ug/kg	7.55 Y D

SAMPLE DATA PACKAGE 17744 CHY 11 1189

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66	252	~~2033~~ 2039	16:45	63	0.962	A BV	~~142028.~~ 32500	~~28.450~~ NG 6.47×1500 = 9700 ug/kg	6.88 Y D
67	252	2101	17:18	63	0.994	A VV	~~66900.~~ 63,845	~~16.362~~ 15.64 NG	3.96 Y D
68	276	2411	19:51	63	1.141	A BB	43812.	9.793 NG	2.37 Y D
69	278	2417	19:54	63	1.144	A VB	14424.	3.967 NG	0.96 Y D
70	276	2501	20:36	63	1.184	A BB	33040.	8.308 NG	2.01 Y D
71	112	488	4:01	1	0.728	A BB	8272.	1.399 NG	0.34
72	99	622	5:07	1	0.928	A BV	8324.	1.124 NG	0.27
73	132	639	5:16	1	0.954	A BB	7112.	1.026 NG	0.25
74	NOT FOUND								
75	82	757	6:14	13	0.873	A BB	9160.	1.189 NG	0.29
76	172	1044	8:36	26	0.905	A BB	13160.	1.089 NG	0.26
77	330	1286	10:35	26	1.115	A BB	2380.	1.142 NG	0.28
78	244	1670	13:45	56	0.904	A BB	9896.	1.451 NG	0.35

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:35	1.00	10.000	0.10	34.06	25.00	1.559	1.144	1.36
52	11:53	1.00	1.000	1.03	5.22	25.00	0.170	0.815	0.21
53	11:39	1.00	10.000	0.10	8.91	25.00	0.355	0.996	0.36
54	12:22		10.000						
55	13:14	1.00	10.000	0.11	47.54	25.00	1.586	0.834	1.90
56	15:14	1.00	10.000	0.10	20.00	20.00	1.000	1.000	1.00
57	[illegible]								

MIDMASS CHROMATOGRAM DATA: G2D77492A21 #1 SCANS 2020 TO 2070
02/12/92 4:43:00 CALI: G2D77492A21 #2
SAMPLE: 2UL CC#477492 ID#CHY21 R6 CS#17744-CHY11 OWA21
CONDS.: EXTRACTED 2/4/92 1: 5 DILUTION
RANGE: G 1,2855 LABEL: N 1, 3.0 QUAN: A 1, 0.1 J 0 BASE: ~~20~~, 3



65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CH421

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	178	1414	11:39	45	1.003	A VV	107240.	13.697	NG	3.40 yes
52	167	1451	11:57	45	1.029	A BB	12436.	2.816	NG	0.70 yes
53	178	1423	11:43	45	1.009	A VV	24560.	3.634	NG	0.90 yes
54	NOT FOUND									
55	202	1615	13:18	45	1.145	A BB	204028.	34.993	NG	8.69 yes
56	240	1858	15:18	56	1.000	A VB	115832.	20.000	NG	4.97 IS 5
57	202	1653	13:37	56	0.890	A VB	164717.	13.861	NG	3.44 yes
58	149	1763	14:31	56	0.949	A BB	9848.	1.854	NG	0.46 yes
59	NOT FOUND									
60	228	1857	15:18	56	0.999	A BV	116709.	17.700	NG	4.40 yes
61	NOT FOUND									
62	228	1863	15:21	56	1.003	A VV	92921.	15.028	NG	3.73 yes
63	264	2132	17:33	63	1.000	A VV	79600.	20.000	NG	4.97 IS 6
64	NOT FOUND									
65	252	2049	16:52	63	0.961	A BV	131,400	26.52	NG	10.73 yes

(8)

×250 = 6600 ng/kg

SAMPLE DATA PACKAGE

17744 CHY 11

1266

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
66	252	2053	16:52	63	0.961	A BV	73500	15.2 ng ×250 = 3800 ng/kg		10.99 yes
67	252	2119	17:27	63	0.994	A VV	103751.	27.361	NG	6.79 yes
68	276	2438	20:05	63	1.144	A BB	59466.	15.128	NG	3.76 yes
69	278	2445	20:08	63	1.147	A*BV	21735.	6.763	NG	1.68 yes
70	NOT FOUND 296	2537					47118	13.994		yes
71	112	491	4:03	1	0.726	A BV	33444.	6.921	NG	1.72
72	99	626	5:09	1	0.926	A BV	37364.	6.348	NG	1.58
73	132	643	5:18	1	0.951	A BB	23572.	5.043	NG	1.25
74	152	699	5:45	1	1.034	A BB	14048.	4.080	NG	1.01
75	82	761	6:16	13	0.871	A BV	24972.	4.198	NG	1.04
76	172	1051	8:39	26	0.904	A BB	34916.	4.451	NG	1.11
77	330	1293	10:39	26	1.113	A BB	5480.	5.972	NG	1.48
78	244	1679	13:50	56	0.904	A VB	27628.	4.018	NG	1.00

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:41	1.00	10.000	0.10	13.70	25.00	0.626	1.142	0.55
52	11:59	1.00	1.000	1.03	2.82	25.00	0.073	0.644	0.11
53	11:45	1.00	10.000	0.10	3.63	25.00	0.143	0.986	0.15
54	12:28		10.000						
55	13:19	1.00	10.000	0.11	34.99	25.00	1.190	0.850	1.40
56	15:20	1.00	10.000	0.10	20.00	20.00	1.000	1.000	1.00
57	13:38	1.00	10.000	0.09	13.86	25.00	1.138	2.052	0.55
58	14:32	1.00	10.000	0.09	1.85	25.00	0.068	0.917	0.07
59	15:17		20.000						
60	15:19	1.00	10.000	0.10	17.70	25.00	0.806	1.138	0.71
61	15:21		10.000						
62	15:22	1.00	10.000	0.10	15.03	25.00	0.683	1.138	0.60

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

	EPA SAMPLE NO.	EPA SAMPLE
	CHY22	CHY22RE

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11 ; No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493 : 477493

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRJ77493A21 GRJ77493A0

Level: (low/med) LOW Date Received: 01/29/92 : 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/04/92 d: 02/14/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92 : 02/24/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0 or: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	TS: G/KG	Q
108-95-2	Phenol	410	U	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U	410	U
95-57-8	2-Chlorophenol	410	U	410	U
541-73-1	1,3-Dichlorobenzene	410	U	410	U
106-46-7	1,4-Dichlorobenzene	410	U	410	U
95-50-1	1,2-Dichlorobenzene	410	U	410	U
95-48-7	2-Methylphenol	410	U	410	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	410	U	410	U
106-44-5	4-Methylphenol	410	U	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U	410	U
67-72-1	Hexachloroethane	410	U	410	U
98-95-3	Nitrobenzene	410	U	410	U
78-59-1	Isophorone	410	U	410	U
88-75-5	2-Nitrophenol	410	U	410	U
105-67-9	2,4-Dimethylphenol	410	U	410	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U	410	U
120-83-2	2,4-Dichlorophenol	410	U	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U	410	U
91-20-3	Naphthalene	59	J	71	J ✓
106-47-8	4-Chloroaniline	410	U	410	U
87-68-3	Hexachlorobutadiene	410	U	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U	410	U
91-57-6	2-Methylnaphthalene	75	J ✓	57	J
77-47-4	Hexachlorocyclopentadiene	410	U	410	U
88-06-2	2,4,6-Trichlorophenol	410	U	410	U
95-95-4	2,4,5-Trichlorophenol	980	U	990	U
91-58-7	2-Chloronaphthalene	410	U	410	U
88-74-4	2-Nitroaniline	980	U	990	U
131-11-3	Dimethyl Phthalate	410	U	410	U
208-96-8	Acenaphthylene	410	U	410	U
606-20-2	2,6-Dinitrotoluene	410	U	410	U
99-09-2	3-Nitroaniline	980	U	990	U
83-32-9	Acenaphthene	410	U	150	J ✓

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

	EPA SAMPLE NO.	EPA SAMPLE
	CHY22	CHY22RE

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11 G No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493 : 477493

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRJ77493A21 GRJ77493AC

Level: (low/med) LOW Date Received: 01/29/92 : 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/04/92 d: 02/14/92

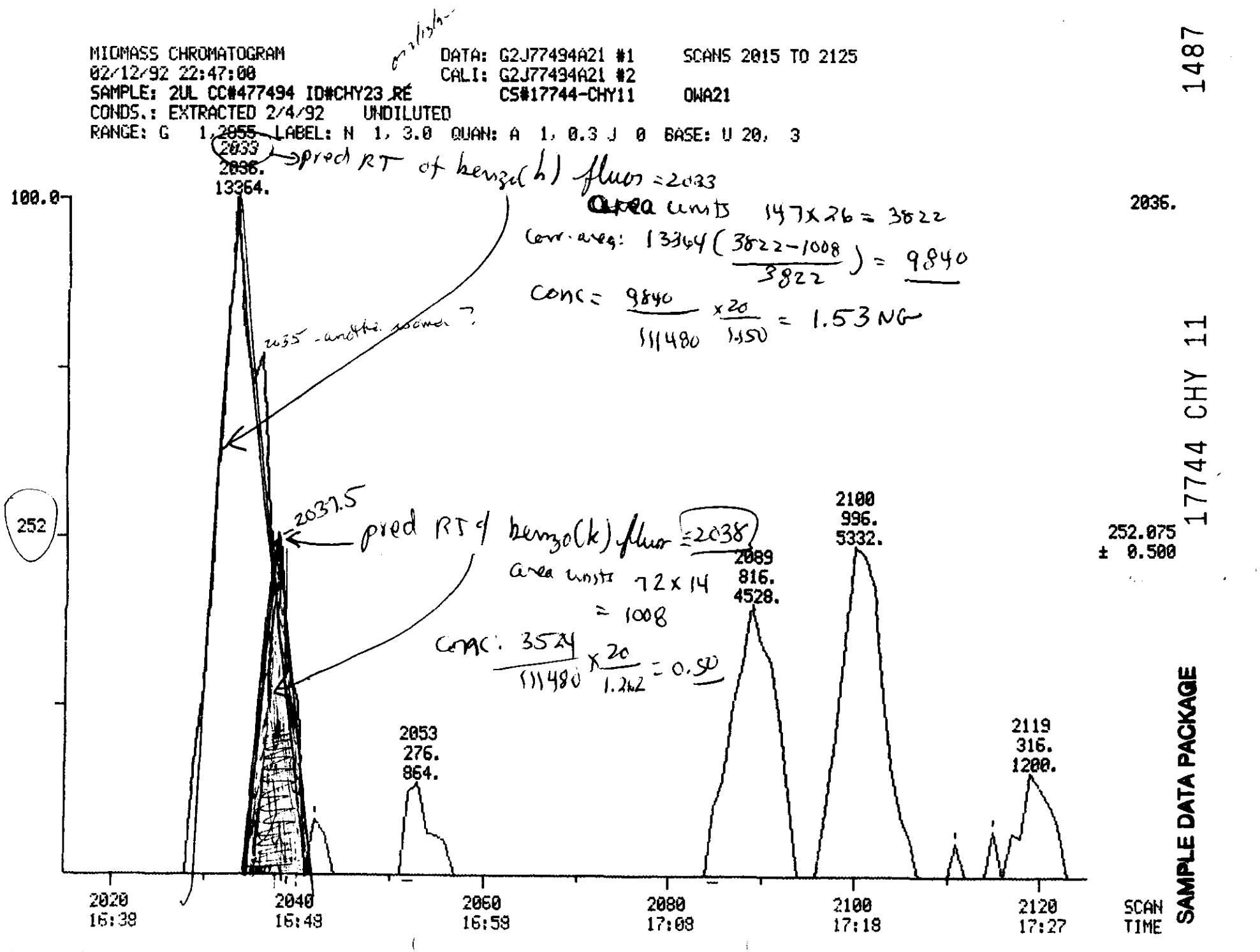
Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92 : 02/24/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0 or: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	TS: G/KG	Q
51-28-5	2,4-Dinitrophenol	980	U	990	U
100-02-7	4-Nitrophenol	980	U	990	U
132-64-9	Dibenzofuran	410	U	61	J
121-14-2	2,4-Dinitrotoluene	410	U	410	U
84-66-2	Diethylphthalate	410	U	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U	410	U
86-73-7	Fluorene	410	U	89	J
100-01-6	4-Nitroaniline	980	U	990	U
534-52-1	4,6-Dinitro-2-Methylphenol	980	U	990	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U	410	U
101-55-3	4-Bromophenyl-phenylether	410	U	410	U
118-74-1	Hexachlorobenzene	410	U	410	U
87-86-5	Pentachlorophenol	980	U	990	U
85-01-8	Phenanthrene	370	J	900	
120-12-7	Anthracene	55	J	150	J
86-74-8	Carbazole	68	J	120	J
84-74-2	Di-n-Butylphthalate	410	U	410	U
206-44-0	Fluoranthene	1100		1500	
129-00-0	Pyrene	530		1300	
85-68-7	Butylbenzylphthalate	410	U	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U	410	U
56-55-3	Benzo(a)Anthracene	410		730	
218-01-9	Chrysene	440		880	
117-81-7	bis(2-Ethylhexyl)Phthalate	410	U	66	J
117-84-0	Di-n-Octyl Phthalate	410	U	410	U
205-99-2	Benzo(b)Fluoranthene	1200	X	1600	
207-08-9	Benzo(k)Fluoranthene	~~1300~~	~~X~~	570	
50-32-8	Benzo(a)Pyrene	380	J	550	
193-39-5	Indeno(1,2,3-cd)Pyrene	450		970	
53-70-3	Dibenz(a,h)Anthracene	98	J	180	J
191-24-2	Benzo(g,h,i)Perylene	350	J	810	

(1) - Cannot be separated from Diphenylamine


MIDMASS CHROMATOGRAM
02/12/92 22:47:00
DATA: G2J77494A21 #1
CALI: G2J77494A21 #2
SCANS 2015 TO 2125
SAMPLE: 2UL CC#477494 ID#CHY23 RE
CS#17744-CHY11
OWA21
CONDS.: EXTRACTED 2/4/92 UNDILUTED
RANGE: G 1.2855 LABEL: N 1, 3.0 QUAN: A 1, 0.3 J 0 BASE: U 20, 3
2033
2036.
13364.
pred RT of benzo(h) fluor = 2033
area units 147 x 26 = 3822
corr. area: 13364 (3822-1008 / 3822) = 9840
conc = 9840 / 111480 x 20/1.50 = 1.53 NG
2035 - another isomer ?
2037.5
pred RT of benzo(k) fluor = 2038
area units 72 x 14 = 1008
conc: 354 / 111480 x 20/1.242 = 0.50
2053
276.
864.
2089
816.
4528.
2100
996.
5332.
2119
316.
1200.
100.0
252
2036.
252.075
± 0.500
2020
16:38
2040
16:48
2060
16:58
2080
17:08
2100
17:18
2120
17:27
SCAN
TIME
1487
17744 CHY 11
SAMPLE DATA PACKAGE

59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
69 419 DIBENZO(A,H)ANTHRACENE (Q6#7) <53-70-3>
70 408 BENZO(G,H,I)PERYLENE (Q6#8) <191-24-2>
71 #619 2-FLUOROPHENOL (SS#1)
72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CN423

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	178	1404	11:34	45	1.003	A BB	~~18052.~~	~~1.032~~ 0.202 NG	0.31
54	NOT FOUND								
55	202	1604	13:13	45	1.146	A BB	27708.	1.891 NG	0.57
56	240	1847	15:13	56	1.000	A BV	152580.	20.000 NG	5.99
57	202	1642	13:31	56	0.889	A BB	22528.	1.502 NG	0.45
58	NOT FOUND								
59	NOT FOUND								
60	228	1851	15:15	56	1.002	A VB	~~9116.~~	~~1.038~~ NG	0.31
61	NOT FOUND								
62	228	1851	15:15	56	1.002	A VB	~~9116.~~	1.052 NG	0.32
63	264	2113	17:24	63	1.000	A BB	111480	20.000 NG	5.99
64	NOT FOUND								
65	252	2033	16:45	63	0.962	A BB	~~133641~~ 9840	~~2.085~~ 1.53×4.2=64 NG	0.62

SAMPLE DATA PACKAGE

17744 CHY 11 1471

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66	252	~~2038~~	~~16:45~~	63	0.962	A BB	~~3524~~	~~0.50~~ ~~1.900~~ NG	0.57
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	112	487	4:01	1	0.727	A BB	248420.	29.167 NG	8.74
72	99	620	5:06	1	0.925	A BV	298432.	27.974 NG	8.38
73	132	637	5:15	1	0.951	A BB	230712.	23.107 NG	6.92
74	152	692	5:42	1	1.033	A BB	141232.	21.316 NG	6.39
75	82	754	6:13	13	0.871	A BV	256564.	23.554 NG	7.06
76	172	1043	8:35	26	0.905	A BB	377756.	22.372 NG	6.70
77	330	1284	10:34	26	1.114	A BB	74604.	25.642 NG	7.68
78	244	1669	13:45	56	0.904	A BV	243412.	24.690 NG	7.40

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:35		10.000						
52	11:53		1.000						
53	11:39	0.99	10.000	0.10	1.03	25.00	0.041	0.996	0.04
54	12:22		10.000						
55	13:14	1.00	10.000	0.11	1.89	25.00	0.063	0.834	0.08
56	15:14	1.00	10.000	0.10	20.00	20.00	1.000	1.000	1.00
57	13:32	1.00	10.000	0.03	1.50	25.00			

59 423 3,3'-DICHLOROBENZIDINE (Q5#5) <91-94-1>
60 405 BENZO(A)ANTHRACENE (Q5#6) <56-55-3>
61 413 BIS(2-ETHYLHEXYL) PHTHALATE (Q5#7) <117-81-7>
62 418 CHRYSENE (Q5#8) <218-01-9>
63 *497 D12-PERYLENE (IS#6)
64 429 DI-N-OCTYL PHTHALATE (Q6#2) <117-84-0>
65 407 BENZO(B)FLUORANTHENE (Q6#3) <205-99-2>
66 409 BENZO(K)FLUORANTHENE (Q6#4) <207-08-9>
67 406 BENZO(A)PYRENE (Q6#5) <50-32-8>
68 437 INDENO(1,2,3-C,D)PYRENE (Q6#6) <193-39-5>
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72 #612 D5-PHENOL (SS#2)
73 #634 2-CHLOROPHENOL-D4 (SS#3)
74 #570 1,2-DICHLOROBENZENE-D4 (SS#4)
75 #447 D5-NITROBENZENE (SS#5)
76 #448 2-FLUOROBIPHENYL (SS#6)
77 #628 2,4,6-TRIBROMOPHENOL (SS#7)
78 #496 D14-TERPHENYL (SS#8)

CHY26

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	178	1413	11:38	45	1.003	A BV	15848.	1.594 NG	0.34 yes
52	NOT FOUND								
53	178	1413	11:38	45	1.003	A BV	15848.	1.847 NG	0.39 NO
54	NOT FOUND								
55	202	1613	13:17	45	1.145	A BB	26428.	3.570 NG	0.76 yes
56	240	1857	15:18	56	1.000	A BB	106520.	20.000 NG	4.24 IS5
57	202	1652	13:36	56	0.890	A BB	22416.	2.051 NG	0.43 yes
58	NOT FOUND								
59	NOT FOUND								
60	228	~~1861~~	15:20	56	1.002	A VB	9020 ~~10132.~~	1.488 ~~1.671~~ NG	0.35 yes
61	NOT FOUND								
62	228	1861	15:20	56	1.002	A VB	10132.	1.782 NG	0.38 yes
63	264	2130	17:32	63	1.000	A BB	82768.	20.000 NG	4.24 IS6
64	NOT FOUND								
65	252	2046	16:51	63	0.961	A BB	~~17892.~~	~~3.469~~ NG	0.74 yes

17,892 × 0.63 = 11,272 corrected benzo(b)... [illegible]

Corrected ng = 3.469 × 0.63 = 2.185 ng [illegible]

SAMPLE DATA PACKAGE

17744 CHY 11 1528

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
66	252	~~2046~~ 2050	16:51	63	0.961	A BB	~~17892.~~	~~3.552~~ NG	0.75 yes
67	252	2117	17:26	63	0.994	A VB	7012.	1.778 NG	0.38 yes
68	276	2437	20:04	63	1.144	A BB	5324.	1.303 NG	0.28 NO
69	NOT FOUND								
70	NOT FOUND								
71	112	491	4:03	1	0.728	A BV	235688.	46.665 NG	9.89
72	99	624	5:08	1	0.926	A BV	312132.	50.732 NG	10.76
73	132	642	5:17	1	0.953	A BV	184024.	37.666 NG	7.99
74	152	697	5:44	1	1.034	A BB	111300.	30.926 NG	6.56
75	82	759	6:15	13	0.870	A BV	229236.	35.780 NG	7.59
76	172	1050	8:39	26	0.904	A BB	293684.	32.373 NG	6.86
77	330	1292	10:38	26	1.113	A BB	44132.	41.592 NG	8.82
78	244	1678	13:49	56	0.904	A BB	222416.	35.176 NG	7.46

Benz(k): 17842 × 0.37; Corr. ng = 3.552 × 0.37 = 1.314 ng

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	11:41	1.00	10.000	0.10	1.59	25.00	0.073	1.142	0.06
52	11:59		1.000						
53	11:45	0.99	10.000	0.10	1.85	25.00	0.073	0.986	0.07
54	12:28		10.000						
55	13:19	1.00	10.000	0.11	3.57	25.00	0.121	0.850	0.14

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Instrument ID: OWA08 Calibration date: 02/17/92 Time: 1746

Lab File ID: HG920217B08 Init. Calib. Date(s): 01/07/92 01/07/92

Init. Calib. Times: 1446 1920

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.602	1.594		0.5	
4-Chlorophenyl-phenylether	0.618	0.718	0.400	-16.2	25.0
Fluorene	1.181	1.249	0.900	-5.8	25.0
4-Nitroaniline	0.224	0.251		-12.0	
4,6-Dinitro-2-Methylphenol	0.121	0.134		-10.7	
N-Nitrosodiphenylamine (1)	0.464	0.423		8.8	
4-Bromophenyl-phenylether	0.242	0.262	0.100	-8.3	25.0
Hexachlorobenzene	0.336	0.366	0.100	-8.9	25.0
Pentachlorophenol	0.162	0.163	0.050	-0.6	25.0
Phenanthrene	1.077	1.079	0.700	-0.2	25.0
Anthracene	0.971	0.967	0.700	0.4	25.0
Carbazole	0.753	0.897		-19.1	
Di-n-Butylphthalate	1.782	1.674		6.1	
Fluoranthene	0.870	1.041	0.600	-19.7	25.0
Pyrene	1.484	1.339	0.600	9.8	25.0
Butylbenzylphthalate	1.103	0.863		21.8	
3,3'-Dichlorobenzidine	0.202	0.191		5.4	
Benzo(a)Anthracene	1.122	1.163	0.800	-3.7	25.0
Chrysene	1.047	1.073	0.700	-2.5	25.0
bis(2-Ethylhexyl)Phthalate	1.793	1.358		24.3	
Di-n-Octyl Phthalate	3.217	2.890		10.2	
Benzo(b)Fluoranthene	1.268	1.341	0.700	-5.8	25.0
Benzo(k)Fluoranthene	1.164	1.150	0.700	1.2	25.0
Benzo(a)Pyrene	1.034	1.049	0.700	-1.5	25.0
Indeno(1,2,3-cd)Pyrene	1.142	0.897	0.500	21.4	25.0
Dibenz(a,h)Anthracene	0.961	0.781	0.400	~~18.7~~	25.0
Benzo(g,h,i)Perylene	1.033	0.761	0.500	26.3	25.0
Nitrobenzene-d5	0.486	0.516	0.200	-6.2	25.0
2-Fluorobiphenyl	1.308	1.354	0.700	-3.5	25.0
Terphenyl-d14	1.104	1.033	0.500	6.4	25.0
Phenol-d5	1.855	2.007	0.800	-8.2	25.0
2-Fluorophenol	1.513	1.600	0.600	-5.8	25.0
2,4,6-Tribromophenol	0.224	0.266		-18.8	
2-Chlorophenol-d4	1.396	1.536	0.800	-10.0	25.0
1,2-Dichlorobenzene-d4	0.847	0.908	0.400	-7.2	25.0

affects Chy 16

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

ORIGINAL
Red

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

GC Column (1): DB-608 ID: 0.53(mm) GC Column (2): RTX-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC	TCX 1 #	TCX 2 %REC	TCX 2 #	DCB 1 %REC	DCB 1 #	DCB 2 %REC	DCB 2 #	OTHER (1)	OTHER (2)	TOT OUT
01	CHY07MS	89		94		100		110				0
02	CHY07MSD	91		93		110		110				0
03	CHY02	84		86		100		110				0
04	CHY03	89		91		100		110				0
05	CHY04	88		89		100		110				0
06	CHY05	82		77		100		110				0
07	CHY06	80		74		100		100				0
08	CHY07	74		83		95		100				0
09	CHY08	79		78		97		100				0
10	CHY09	82		79		99		100				0
11	CHY10	80		77		100		110				0
12	CHY24	79		95		100		110				0
13	PBLK08	79		82		91		97				0
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

	QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values.
* Values outside of QC Limits
D Surrogate diluted out.

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6759HQ SDG No.: CHY02

Matrix Spike - EPA Sample No.: CHY07

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
gamma-BHC (Lindane)	0.500	0.00	0.42	84	56-123
Heptachlor	0.500	0.00	0.41	82	40-131
Aldrin	0.500	0.00	0.39	78	40-120
Dieldrin	1.000	0.00	0.83	83	52-126
Endrin	1.000	0.00	0.93	93	56-121
4,4'-DDT	1.000	0.00	0.90	90	38-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	0.500	0.42	84	0	15	56-123
Heptachlor	0.500	0.41	82	0	20	40-131
Aldrin	0.500	0.39	78	0	22	40-120
Dieldrin	1.000	0.84	84	1	18	52-126
Endrin	1.000	0.95	95	2	21	56-121
4,4'-DDT	1.000	0.92	92	2	27	38-127

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

2F
SOIL PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

GC Column (1): DB-608 ID: 0.53(mm) GC Column (2): RTX-1701 ID: 0.53(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT	
01	CHY11	140	0*	63	74			1	✓
02	CHY11DL	140	48*	48*	65			2	✓
03	CHY12	52*	55*	56*	74			3	✓
04	CHY13	80	120	110	99			0	✓
05	CHY14	100	0*	46*	64			2	
06	CHY14DL	99	0*	70	57*			2	
07	CHY16	95	85	340*	380*			2	
08	CHY17	76	60	0*	340*			2	
09	CHY19	96	120	100	130			0	✓
10	CHY20	65	41*	280*	280*			3	
11	CHY22 *	25*	81 ✓	43*	140			2	~
12	CHY23	77	97	57*	150			1	✓
13	CHY26	78	88	63	110			0	✓
14	PBLK18	85	100	97	100			0	✓
15	CHY18MS	68	52*	200*	220*			3	~
16	CHY18MSD	74	91	310*	150			1	~
17	CHY18	84	110	180*	190*			2	-
18	PBLK62	75	94	74	77			0	
19	CHY15	0D	0D	0D	0D			0	
20	CHY15DL	0D	0D	0D	0D			0	
21	CHY21	53*	37*	300*	270*			4	
22	PBLK73	74	89	83	81			0	
23									
24									
25									
26									
27									
28									
29									
30									

* CHY22 - no obvious matrix effects to account for sporadic TCX recoveries

	QC LIMITS
TCX = Tetrachloro-m-xylene	(60-150)
DCB = Decachlorobiphenyl	(60-150)

Column to be used to flag recovery values.
* Values outside of QC Limits
D Surrogate diluted out.

3F

SOIL PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix Spike - EPA Sample No.: CHY18

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
gamma-BHC (Lindane)	23.148	0.00	15	65	46-127
Heptachlor	23.148	0.00	15	65	35-130
Aldrin	23.148	0.36	14	59	34-132
Dieldrin	46.296	0.27	29	62	31-134
Endrin	46.296	2.6	36	72	42-139
4,4'-DDT	46.296	0.48	29	62	23-134

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
gamma-BHC (Lindane)	23.148	15	65	0	50	46-127
Heptachlor	23.148	14	60	8	31	35-130
Aldrin	23.148	14	59	0	43	34-132
Dieldrin	46.296	29	62	0	38	31-134
Endrin	46.296	34	68	6	45	42-139
4,4'-DDT	46.296	32	68	9	50	23-134

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits
Spike Recovery: 0 out of 12 outside limits

COMMENTS: _____

ORIGINAL
(Red)

LABORATORY NOTICE
Pesticide Fraction

Sample I.D.'s 477485 / 477492 Client I.D.'s CHY15 / CHY21
Case 17744 SDG CHY11 SAS 65791HQ

The above samples were extracted and analyzed within contractual holding times. After all the samples in the extraction batch had been completed, the GC/MS data reviewers sent a TIC report to the laboratory requesting confirmation of PCB in sample I.D. #477485 (CHY15), which did not match the I.D. number of the sample sent for confirmation prior to their report, which was sample I.D. #477492 (CHY21). These samples were then reextracted outside holding times and reanalyzed. The reextract data matched the TIC report for CHY15, however, we could not verify the original results for all of the target analytes in the reextract data for CHY21. We are, therefore, reporting the reextract data for these two samples with reference to this notice.

Pesticide fraction of Sample CHY15 and CHY21 were initially switched. RS 6/7/92

Data Reviewer/I.D. (b) (4) / 1569
Date 2/26/92

COMPUCHEM LABORATORIES, INC. P.O. Box 12652 3308 Chapel Hill/Nelson Highway Research Triangle Park, NC 27709 (919) 549-8263

SDG Narrative # CHY11
Case # 17744 SAS # 6579HQ
Contract # SAS6579HQ
CompuChem Laboratories, Inc.

SAMPLE IDENTIFICATIONS: CHY11, CHY12, CHY13, CHY14, CHY15, CHY16, CHY17, CHY18, CHY19, CHY20, CHY21, CHY22, CHY23, CHY26

All pertinent Quality Assurance and Laboratory notices for CASE# 17744, SDG# CHY11, SAS# 6579HQ are included in the sample data package.

PESTICIDES:

Pesticides Target Compound List (TCL) analytes were confirmed in nine of these samples above the Contract Required Quantitation Limits (CRQLs). Holding time requirements were initially met for all of these samples.

The initial analyses of samples CHY11 and CHY14 yielded TCL analytes that were above the analytical range. Each of these samples were reanalyzed at a 2X dilution in order to report the analytes within the analytical range. Both analyses for each of these samples are reported as billable.

Semivolatile analysis of sample CHY15 indicated that a PCB confirmational analysis was necessary. Inspection of the pesticide data for this sample indicated that no PCBs were present in this sample; however, the pesticide analysis of sample CHY21 contained PCB. These samples were reextracted outside of holding time and reanalyzed. Results from the reanalysis of sample CHY15 verified the semivolatile GCMS TIC identification of PCBs in the sample. The original TCL results of CHY21 could not be verified. The reextract data which was outside of holding time is being reported with this case.

The surrogate standard recovery of decachlorobiphenyl (DCB) was outside of the control range on both columns in the analysis of samples CHY18MS, CHY16, CHY17, CHY18, CHY20, and CHY21. These outliers have been attributed to matrix interference and not to deficiencies in laboratory practice.

The surrogate standard recovery of DCB was outside of the control range on the DB-608 column in the analysis of sample CHY18MSD. The surrogate standard recovery of tetrachloro-m-xylene was outside of the control range on the RTX-1701 column in the analyses of samples CHY11, CHY14, and CHY14DL. These outliers are due to matrix interferences which affected accurate quantitation.

No surrogate recoveries are reported in sample CHY15 and CHY15DL due to the 20X and 200X dilution that were necessary to report accurate results. Arochlor 1260 was detected in the GC analysis at concentrations that require GCMS analysis. Results from the GCMS qualitative analysis positively identified arochlor 1260 in sample CHY15. Both the 20X and the 200X dilution are reported as billable.

Pest. fraction of Samples initially switched
MS 6/7/92

ORIGINAL

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY21 RE

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477492 R1

Sample wt/vol: 30.00 (g/ml) G Lab File ID:

% Moisture: 35 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/20/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/22/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

Reanal → NO PCBs at High Level

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
319-84-6	alpha-BHC	2.6	U
319-85-7	beta-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	0.18	JP
76-44-8	Heptachlor	0.81	JPB
309-00-2	Aldrin	1.4	JP
1024-57-3	Heptachlor epoxide	2.6	U
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	2.4	JP
72-55-9	4,4'-DDE	6.4	
72-20-8	Endrin	5.1	U
33213-65-9	Endosulfan II	5.1	U
72-54-8	4,4'-DDD	5.1	U
1031-07-8	Endosulfan sulfate	5.1	U
50-29-3	4,4'-DDT	13	P
72-43-5	Methoxychlor	110	P
53494-70-5	Endrin ketone	5.1	U
7421-93-4	Endrin aldehyde	20	P
5103-71-9	alpha-Chlordane	2.4	JP
5103-74-2	gamma-Chlordane	5.7	P
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	51	U
11096-82-5	Aroclor-1260	460	PB

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY21 initial

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477492 D51

Sample wt/vol: 30.10 (g/ml) G Lab File ID: PC077492B20

% Moisture: 35 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

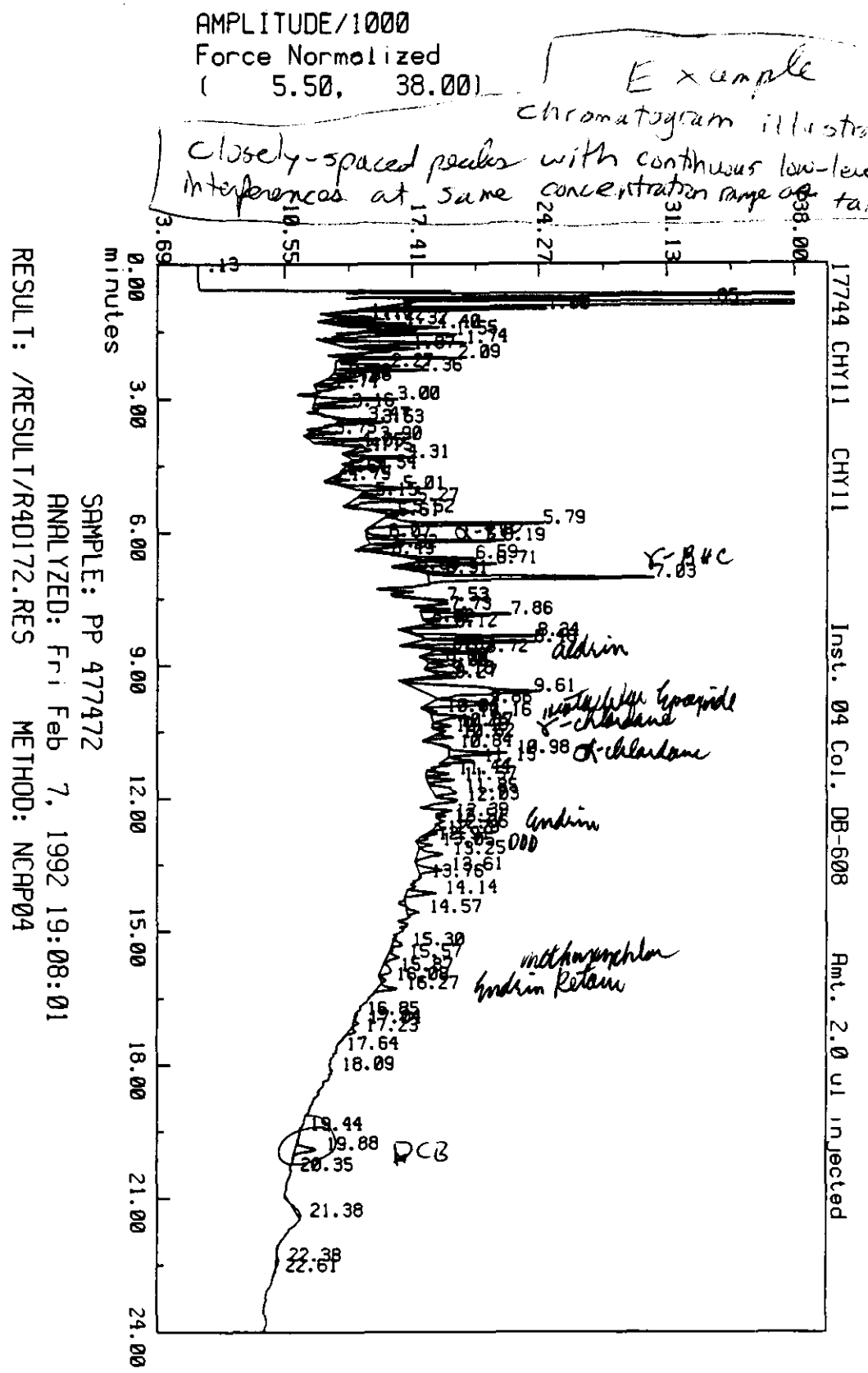
Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

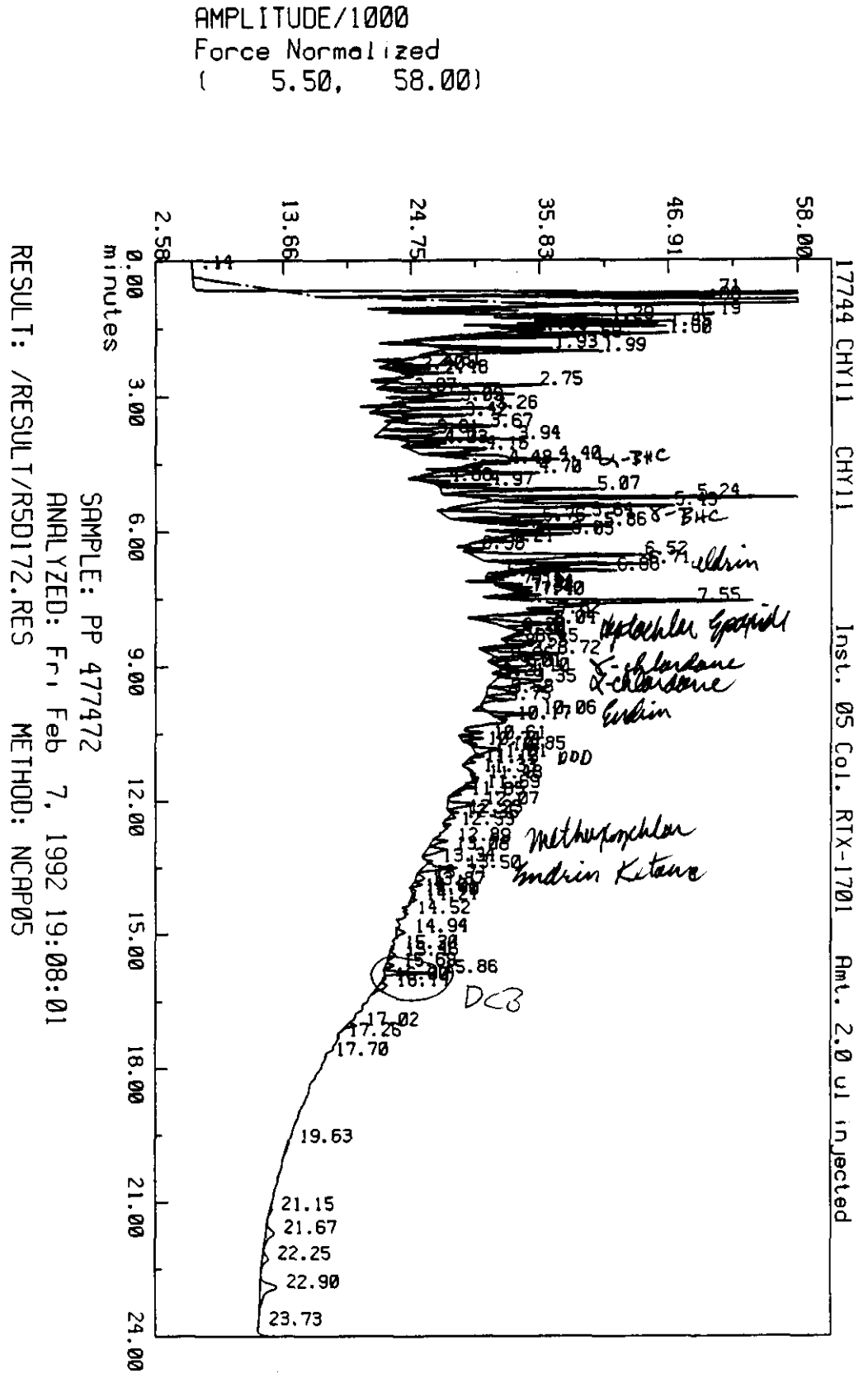
Injection Volume: 2.0 (uL) Dilution Factor: 50

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

initial - high level PCBs

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	48	JP
319-85-7	beta-BHC	130	U
319-86-8	delta-BHC	130	U
58-89-9	gamma-BHC (Lindane)	130	U
76-44-8	Heptachlor	130	U
309-00-2	Aldrin	94	JP
1024-57-3	Heptachlor epoxide	130	U
959-98-8	Endosulfan I	130	U
60-57-1	Dieldrin	250	U
72-55-9	4,4'-DDE	250	U
72-20-8	Endrin	250	U
33213-65-9	Endosulfan II	250	U
72-54-8	4,4'-DDD	250	U
1031-07-8	Endosulfan sulfate	250	U
50-29-3	4,4'-DDT	250	U
72-43-5	Methoxychlor	1300	U
53494-70-5	Endrin ketone	250	U
7421-93-4	Endrin aldehyde	250	U
5103-71-9	alpha-Chlordane	130	U
5103-74-2	gamma-Chlordane	130	U
8001-35-2	Toxaphene	13000	U
12674-11-2	Aroclor-1016	2500	U
11104-28-2	Aroclor-1221	5100	U
11141-16-5	Aroclor-1232	2500	U
53469-21-9	Aroclor-1242	2500	U
12672-29-6	Aroclor-1248	2500	U
11097-69-1	Aroclor-1254	2500	U
11096-82-5	Aroclor-1260	660000	C


AMPLITUDE/1000
Force Normalized
(5.50, 38.00)
Example chromatogram illustrating closely-spaced peaks with continuous low-level interferences at same concentration range as targets.
3.69
10.55
17.41
24.27
31.13
38.00
minutes
0.00
3.00
6.00
9.00
12.00
15.00
18.00
21.00
24.00
17744 CHY11 CHY11 Inst. 04 Col. DB-608 Amt. 2.0 ul injected
SAMPLE: PP 477472
ANALYZED: Fri Feb 7, 1992 19:08:01
RESULT: /RESULT/R4D172.RES METHOD: NCAP04
5.79
7.03
7.86
aldrin
9.61
γ-chlordane
α-chlordane
endrin
14.14
14.57
15.30
15.57
16.27
methoxychlor
endrin ketone
17.64
18.09
19.44
19.88
20.35
DCB
21.38
22.38
22.61


AMPLITUDE/1000
Force Normalized
(5.50, 58.00)
2.58
13.66
24.75
35.83
46.91
58.00
0.00
3.00
6.00
9.00
12.00
15.00
18.00
21.00
24.00
minutes
17744 CHY11 CHY11 Inst. 05 Col. RTX-1701 Amt. 2.0 ul injected
SAMPLE: PP 477472
ANALYZED: Fri Feb 7, 1992 19:08:01
RESULT: /RESULT/R5D172.RES METHOD: NCAP05
1.99
2.75
3.26
3.67
3.94
4.40
4.70
5.07
5.24
5.86
6.52
7.55
8.72
10.06
14.52
14.94
15.86
17.02
17.26
17.70
19.63
21.15
21.67
22.25
22.90
23.73
δ-BHC
Endrin
DDD
Methoxychlor
Endrin Ketone
DCB

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY11DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477472 D20 Date(s) Analyzed: 02/13/92 02/13/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	5.65	5.61	5.71	31	
	2	7.03	6.98	7.08	67	116.1
delta-BHC	1	7.75	7.73	7.83	1.5	
	2	8.12	8.12	8.22	12	700.0
Aldrin	1	6.71	6.63	6.73	14	
	2	8.63	8.60	8.70	3.7	278.4
Heptachlor epoxide	1	8.20	8.16	8.30	1.7	
	2	10.15	10.05	10.19	9.5	458.8
gamma-Chlordane	1	9.01	8.87	9.01	3.3	
	2	10.48	10.47	10.61	2.7	22.2
alpha-Chlordane	1	9.10	9.06	9.20	4.4	
	2	10.97	10.88	11.02	12	172.7
Endrin	1	10.06	10.03	10.17	6.7	
	2	12.66	12.63	12.77	3.9	71.8
4,4'-DDD	1	11.13	11.07	11.21	1.8	
	2	13.04	13.02	13.16	4.8	166.7

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY11

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477472 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	6.07	6.00	6.10	3.7	
	2	4.88	4.79	4.89	3.4	8.8
gamma-BHC (Lindane)	1	7.03	7.00	7.10	52	
	2	5.64	5.63	5.73	34	52.9
Aldrin	1	8.63	8.62	8.72	4.4	
	2	6.71	6.64	6.74	17	286.4
Heptachlor epoxide	1	10.16	10.06	10.20	11	
	2	8.20	8.17	8.31	0.95	999.9
gamma-Chlordane	1	10.48	10.48	10.62	1.0	
	2	9.01	8.89	9.03	4.1	310.0
alpha-Chlordane	1	10.98	10.90	11.04	14	
	2	9.10	9.07	9.21	5.3	164.2
Endrin	1	12.66	12.66	12.80	3.2	
	2	10.06	10.06	10.20	9.8	206.2
4,4'-DDD	1	13.05	13.03	13.17	5.4	
	2	11.13	11.08	11.22	2.8	92.9

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477476 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	6.07	6.00	6.10	0.38	
	2	4.87	4.79	4.89	0.48	26.3
Heptachlor	1	7.86	7.80	7.90	1.8	
	2	6.08	6.08	6.18	0.13	999.9
Aldrin	1	8.65	8.62	8.72	1.1	
	2	6.72	6.64	6.74	2.3	109.1
gamma-Chlordane	1	10.55	10.48	10.62	4.5	
	2	8.94	8.89	9.03	3.5	28.6
alpha-Chlordane	1	10.93	10.90	11.04	4.1	
	2	9.13	9.07	9.21	9.3	126.8
4,4'-DDE	1	11.66	11.61	11.75	4.4	
	2	9.36	9.31	9.45	9.4	113.6
Endrin	1	12.70	12.66	12.80	7.6	
	2	10.09	10.06	10.20	9.4	23.7
4,4'-DDD	1	13.07	13.03	13.17	4.9	
	2	11.10	11.08	11.22	4.8	2.1

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477476 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endosulfan II	1	13.21	13.13	13.27	2.5	
	2	11.22	11.14	11.28	12	380.0
4,4'-DDT	1	13.79	13.78	13.92	13	
	2	11.49	11.47	11.61	3.2	306.3
Endrin aldehyde	1	14.04	13.96	14.10	2.6	
	2	12.12	12.04	12.18	21	707.7
Endosulfan sulfate	1	14.42	14.28	14.42	4.7	
	2	12.91	12.77	12.91	16	240.4
Methoxychlor	1	16.08	15.99	16.13	15	
	2	13.08	12.97	13.11	45	200.0
	1					
	2					
	1					
	2					
	1					
	2					

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY13

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477483 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Heptachlor	1	7.86	7.80	7.90	1.1	poor
	2	6.11	6.08	6.18	0.14	685.7
Aldrin	1	8.66	8.62	8.72	0.33	
	2	6.74	6.64	6.74	0.41	24.2
Heptachlor epoxide	1	10.17	10.06	10.20	0.56	
	2	8.24	8.17	8.31	0.24	133.3
gamma-Chlordane	1	10.52	10.48	10.62	0.13	
	2	8.99	8.89	9.03	0.13	0.0
alpha-Chlordane	1	10.94	10.90	11.04	0.26	poor
	2	9.16	9.07	9.21	1.7	553.8
Dieldrin	1	11.82	11.74	11.88	4.5	poor
	2	9.63	9.59	9.73	0.46	878.3
Endrin	1	12.78	12.66	12.80	2.6	
	2	10.12	10.06	10.20	1.6	62.5
Endosulfan II	1	13.23	13.13	13.27	0.71	
	2	11.23	11.14	11.28	0.32	121.9

10A

EPA SAMPLE NO.

CHY14DL

PESTICIDE IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477484 D20 Date(s) Analyzed: 02/13/92 02/13/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	5.66	5.61	5.71	34	
	2	7.04	6.98	7.08	46	35.3
Heptachlor	1	6.06	6.06	6.16	2.8	poor
	2	7.86	7.78	7.88	21	650.0
delta-BHC	1	7.83	7.73	7.83	5.5	
	2	8.12	8.12	8.22	14	154.5
Aldrin	1	6.72	6.63	6.73	12	
	2	8.63	8.60	8.70	3.2	275.0
Heptachlor epoxide	1	8.22	8.16	8.30	4.6	
	2	10.05	10.05	10.19	1.9	142.1
gamma-Chlordane	1	8.87	8.87	9.01	1.1	
	2	10.49	10.47	10.61	3.7	236.4
Endosulfan I	1	8.75	8.75	8.89	14	
	2	10.98	10.93	11.07	22	57.1
Dieldrin	1	9.59	9.57	9.71	3.3	
	2	11.84	11.71	11.85	5.9	78.8

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY14DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477484 D20 Date(s) Analyzed: 02/13/92 02/13/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endrin	1	10.07	10.03	10.17	6.6	
	2	12.67	12.63	12.77	4.5	46.7
4,4'-DDD	1	11.14	11.07	11.21	3.8	
	2	13.06	13.02	13.16	5.4	42.1
4,4'-DDT	1	11.49	11.45	11.59	1.8	
	2	13.78	13.75	13.89	2.8	55.6
Endrin aldehyde	1	12.12	12.02	12.16	11	
	2	14.01	13.94	14.08	2.7	307.4
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY14

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477484 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	6.00	6.00	6.10	0.36	
	2	4.88	4.79	4.89	2.8	677.8
gamma-BHC (Lindane)	1	7.04	7.00	7.10	49	
	2	5.65	5.63	5.73	40	22.5
Aldrin	1	8.64	8.62	8.72	4.3	
	2	6.72	6.64	6.74	15	248.8
Heptachlor epoxide	1	10.16	10.06	10.20	12	
	2	8.21	8.17	8.31	5.6	114.3
gamma-Chlordane	1	10.49	10.48	10.62	3.3	
	2	9.01	8.89	9.03	3.7	12.1
alpha-Chlordane	1	10.99	10.90	11.04	24	
	2	9.11	9.07	9.21	6.2	287.1
Endrin	1	12.69	12.66	12.80	4.4	
	2	10.07	10.06	10.20	14	218.2
4,4'-DDD	1	13.06	13.03	13.17	6.4	
	2	11.14	11.08	11.22	4.3	48.8

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY14

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477484 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
4,4'-DDT	1	13.79	13.78	13.92	1.5	
	2	11.49	11.47	11.61	2.4	60.0
Endrin aldehyde	1	14.00	13.96	14.10	3.1	
	2	12.11	12.04	12.18	12	287.1
Endosulfan sulfate	1	14.29	14.28	14.42	0.69	
	2	12.91	12.77	12.91	4.0	479.7
Methoxychlor	1	16.09	15.99	16.13	10.0	
	2	13.09	12.97	13.11	25	150.0
Endrin ketone	1	16.28	16.17	16.31	8.2	
	2	13.73	13.62	13.76	4.6	78.3
	1					
	2					
	1					
	2					
	1					
	2					

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY16

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477486 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	4.86	4.79	4.89	3.5	
	2	6.00	6.00	6.10	1.1	218.2
gamma-BHC (Lindane)	1	5.73	5.63	5.73	4.4	
	2	7.05	7.00	7.10	100	999.9
beta-BHC	1	7.35	7.27	7.37	6.6	
	2	7.21	7.21	7.31	3.9	69.2
Heptachlor	1	6.17	6.08	6.18	0.16	
	2	7.85	7.80	7.90	20	999.9
Aldrin	1	6.64	6.64	6.74	2.6	
	2	8.65	8.62	8.72	6.3	142.3
gamma-Chlordane	1	8.96	8.89	9.03	15	
	2	10.55	10.48	10.62	11	36.4
alpha-Chlordane	1	9.14	9.07	9.21	31	
	2	10.93	10.90	11.04	11	181.8
Endosulfan I	1	8.86	8.77	8.91	15	
	2	11.04	10.96	11.10	0.37	999.9

ORIGINAL
(Red)

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY16

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477486 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
4,4'-DDE	1	9.35	9.31	9.45	42	
	2	11.67	11.61	11.75	13	223.1
Dieldrin	1	9.63	9.59	9.73	37	
	2	11.80	11.74	11.88	74	100.0
Endrin	1	10.07	10.06	10.20	46	
	2	12.70	12.66	12.80	160	247.8
Endosulfan II	1	11.22	11.14	11.28	190	
	2	13.21	13.13	13.27	64	196.9
Endrin aldehyde	1	12.11	12.04	12.18	360	
	2	14.03	13.96	14.10	53	579.2
Endosulfan sulfate	1	12.91	12.77	12.91	190	
	2	14.37	14.28	14.42	19	900.0
Methoxychlor	1	13.03	12.97	13.11	180	
	2	16.07	15.99	16.13	410	127.8
	1					
	2					

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY17

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477487 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	5.66	5.63	5.73	14	
	2	7.06	7.00	7.10	31	121.4
Heptachlor	1	6.12	6.08	6.18	21	
	2	7.84	7.80	7.90	16	31.2
Aldrin	1	6.69	6.64	6.74	15	
	2	8.66	8.62	8.72	14	7.1
Heptachlor epoxide	1	8.19	8.17	8.31	0.19	pos
	2	10.17	10.06	10.20	1.2	531.6
gamma-Chlordane	1	8.98	8.89	9.03	4.7	pos
	2	10.56	10.48	10.62	0.093	999.9
Dieldrin	1	9.65	9.59	9.73	31	
	2	11.81	11.74	11.88	47	51.6
Endrin	1	10.10	10.06	10.20	55	
	2	12.72	12.66	12.80	39	41.0
Endosulfan II	1	11.25	11.14	11.28	2.8	
	2	13.24	13.13	13.27	2.2	27.3

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477489 R1 Date(s) Analyzed: 02/18/92 02/18/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Aldrin	1	8.61	8.60	8.70	0.36	
	2	6.71	6.63	6.73	0.76	111.1
Heptachlor epoxide	1	10.12	10.05	10.19	1.1	
	2	8.18	8.16	8.30	0.54	103.7
gamma-Chlordane	1	10.58	10.47	10.61	0.23	poor
	2	8.96	8.87	9.01	3.7	999.9
4,4'-DDE	1	11.64	11.59	11.73	2.8	
	2	9.34	9.30	9.44	3.2	14.3
Dieldrin	1	11.77	11.71	11.85	19	poor
	2	9.60	9.57	9.71	0.27	999.9
Endrin	1	12.73	12.63	12.77	2.6	poor
	2	10.07	10.03	10.17	15	476.9
Endosulfan II	1	13.18	13.11	13.25	2.6	
	2	11.20	11.12	11.26	2.7	3.8
4,4'-DDT	1	13.80	13.75	13.89	0.72	
	2	11.47	11.45	11.59	0.48	50.0

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477489 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Heptachlor	1	7.85	7.80	7.90	0.30	
	2	6.08	6.08	6.18	0.12	150.0
Heptachlor epoxide	1	10.17	10.06	10.20	1.8	
	2	8.22	8.17	8.31	0.33	445.5
gamma-Chlordane	1	10.58	10.48	10.62	4.1	
	2	8.94	8.89	9.03	1.1	272.7
alpha-Chlordane	1	10.94	10.90	11.04	1.7	
	2	9.14	9.07	9.21	4.8	182.4
4,4'-DDE	1	11.67	11.61	11.75	1.3	
	2	9.36	9.31	9.45	2.5	92.3
Dieldrin	1	11.81	11.74	11.88	2.4	
	2	9.64	9.59	9.73	1.0	140.0
Endrin	1	12.71	12.66	12.80	4.2	
	2	10.10	10.06	10.20	5.0	19.0
4,4'-DDD	1	13.08	13.03	13.17	2.5	
	2	11.10	11.08	11.22	0.99	152.5

ORIGINAL (Red)

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY18

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477489 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endosulfan II	1	13.20	13.13	13.27	0.49	poor
	2	11.23	11.14	11.28	5.2	961.2
4,4'-DDT	1	13.79	13.78	13.92	6.1	
	2	11.50	11.47	11.61	2.2	177.3
Endrin aldehyde	1	14.02	13.96	14.10	1.0	
	2	12.12	12.04	12.18	7.5	650.0
Endosulfan sulfate	1	14.28	14.28	14.42	0.92	poor
	2	12.90	12.77	12.91	5.5	497.8
Methoxychlor	1	16.06	15.99	16.13	200	
	2	13.08	12.97	13.11	11	999.9
	1					
	2					
	1					
	2					
	1					
	2					

10A

PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY19

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477490 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-BHC	1	6.02	6.00	6.10	0.081	
	2	4.85	4.79	4.89	0.15	85.2
Heptachlor	1	7.86	7.80	7.90	1.3	
	2	6.11	6.08	6.18	0.15	766.7
Aldrin	1	8.65	8.62	8.72	0.39	
	2	6.74	6.64	6.74	0.50	28.2
Heptachlor epoxide	1	10.17	10.06	10.20	0.41	
	2	8.21	8.17	8.31	0.63	53.7
4,4'-DDE	1	11.69	11.61	11.75	1.2	
	2	9.36	9.31	9.45	1.1	9.1
Dieldrin	1	11.82	11.74	11.88	6.3	
	2	9.64	9.59	9.73	0.10	999.9
Endrin	1	12.78	12.66	12.80	1.5	
	2	10.10	10.06	10.20	6.0	300.0
Endosulfan II	1	13.24	13.13	13.27	0.48	
	2	11.23	11.14	11.28	0.87	81.2

ORIGINAL
Red

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY20

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477491 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

Note: Chromatogram had continuous peaks similar Heights.

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
beta-BHC	1	7.36	7.27	7.37	5.4	
	2	7.31	7.21	7.31	1.3	315.4
Heptachlor	1	6.08	6.08	6.18	1.8	poor
	2	7.86	7.80	7.90	17	844.4
Aldrin	1	6.72	6.64	6.74	8.1	
	2	8.65	8.62	8.72	5.6	44.6
Heptachlor epoxide	1	8.23	8.17	8.31	2.3	poor
	2	10.17	10.06	10.20	8.6	273.9
gamma-Chlordane	1	8.97	8.89	9.03	15	poor
	2	10.55	10.48	10.62	2.8	435.7
4,4'-DDE	1	9.35	9.31	9.45	11	
	2	11.68	11.61	11.75	11	0.0
Dieldrin	1	9.64	9.59	9.73	14	
	2	11.81	11.74	11.88	38	171.4
Endrin	1	10.08	10.06	10.20	34	
	2	12.71	12.66	12.80	52	52.9

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY20

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477491 Date(s) Analyzed: 02/07/92 02/07/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
Endosulfan II	1	11.23	11.14	11.28	73	
	2	13.21	13.13	13.27	20	265.0
Endrin aldehyde	1	12.11	12.04	12.18	190	
	2	14.03	13.96	14.10	17	999.9
Methoxychlor	1	13.03	12.97	13.11	120	
	2	16.08	15.99	16.13	250	108.3
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

10A

PESTICIDE IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY21

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477492 R1 Date(s) Analyzed: 02/22/92 02/22/92

Instrument ID (1): VARIAN05 Instrument ID (2): VARIAN04

GC Column(1): RTX-1701 ID: 0.53(mm) GC Column(2): DB-608 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	5.70	5.61	5.71	0.18	
	2	7.07	6.98	7.08	54	999.9
Heptachlor	1	6.12	6.06	6.16	0.81	
	2	7.87	7.78	7.88	6.8	739.5
Aldrin	1	6.66	6.63	6.73	1.4	
	2	8.66	8.60	8.70	2.0	42.9
Methoxychlor	1	13.04	12.95	13.09	110	
	2	16.05	15.97	16.11	180	63.6
gamma-Chlordane	1	8.99	8.87	9.01	14	
	2	10.55	10.47	10.61	5.7	145.6
alpha-Chlordane	1	9.16	9.06	9.20	16	
	2	10.92	10.88	11.02	2.4	566.7
4,4'-DDE	1	9.37	9.30	9.44	6.4	
	2	11.67	11.59	11.73	6.5	1.6
Dieldrin	1	9.57	9.57	9.71	2.4	
	2	11.80	11.71	11.85	30	999.9

ORIGINAL

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY22

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477493 Date(s) Analyzed: 02/08/92 02/08/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-Chlordane	1	10.54	10.48	10.62	2.1	Poor
	2	8.91	8.89	9.03	110	999.9
alpha-Chlordane	1	10.91	10.90	11.04	3.5	Poor
	2	9.21	9.07	9.21	17	385.7
4,4'-DDE	1	11.67	11.61	11.75	1.6	
	2	9.35	9.31	9.45	1.6	0.0
Dieldrin	1	11.81	11.74	11.88	9.4	
	2	9.65	9.59	9.73	6.2	51.6
4,4'-DDT	1	13.79	13.78	13.92	3.9	
	2	11.50	11.47	11.61	2.3	69.6
Methoxychlor	1	16.08	15.99	16.13	180	Poor
	2	13.03	12.97	13.11	26	592.3
Endrin ketone	1	16.24	16.17	16.31	13	Poor
	2	13.68	13.62	13.76	0.66	999.9
	1					
	2					

(Red)

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY23

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477494 Date(s) Analyzed: 02/08/92 02/08/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
beta-BHC	1	7.21	7.21	7.31	0.87	
	2	7.35	7.27	7.37	1.8	106.9
Heptachlor	1	7.87	7.80	7.90	0.23	
	2	6.18	6.08	6.18	1.2	421.7
Endrin	1	12.71	12.66	12.80	1.4	
	2	10.11	10.06	10.20	1.5	7.1
Endosulfan II	1	13.22	13.13	13.27	0.41	
	2	11.23	11.14	11.28	1.6	290.2
Endrin aldehyde	1	13.99	13.96	14.10	0.68	
	2	12.12	12.04	12.18	4.3	532.4
Methoxychlor	1	16.08	15.99	16.13	8.1	
	2	13.09	12.97	13.11	1.4	478.6
	1					
	2					
	1					
	2					

10A

PESTICIDE IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

CHY26

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477495 Date(s) Analyzed: 02/08/92 02/08/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
gamma-BHC (Lindane)	1	7.05	7.00	7.10	3.6	
	2	5.69	5.63	5.73	0.091	999.9
beta-BHC	1	7.31	7.21	7.31	0.28	
	2	7.35	7.27	7.37	0.67	139.3
Heptachlor	1	7.86	7.80	7.90	1.9	
	2	6.10	6.08	6.18	0.19	900.0
Aldrin	1	8.65	8.62	8.72	0.58	
	2	6.72	6.64	6.74	0.56	3.6
4,4'-DDE	1	11.66	11.61	11.75	0.80	
	2	9.36	9.31	9.45	1.2	50.0
Dieldrin	1	11.82	11.74	11.88	3.3	
	2	9.63	9.59	9.73	0.26	999.9
Endrin	1	12.78	12.66	12.80	4.0	
	2	10.09	10.06	10.20	3.3	21.2
Endosulfan II	1	13.24	13.13	13.27	0.28	
	2	11.23	11.14	11.28	2.6	828.6

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.
CHY26

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Lab Sample ID : 477495 Date(s) Analyzed: 02/08/92 02/08/92

Instrument ID (1): VARIAN04 Instrument ID (2): VARIAN05

GC Column(1): DB-608 ID: 0.53(mm) GC Column(2): RTX-1701 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
4,4'-DDT	1	13.83	13.78	13.92	10	
	2	11.50	11.47	11.61	0.92	987.0
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

PROJECT NAME: Linfield Industrial Park
Proj. NO.: 32630 9

EPA SITE NO.: PA0 91 28 98
REGION: 3

SUPPORT DOCUMENTATION FOR THE REVIEW OF INORGANIC ANALYTICAL DATA PACKAGE

CASE/SAS NO.: 19744
TYPE OF ANALYSIS: low inorganic / CN-
CONTRACT LABORATORY: ReyTX
APPLICABLE IFB OR SOW: 3/90
REVIEWER: (b) (4)
REVIEW DATE: May 5, 1992

APPLICABLE SAMPLE NO's.: MC JE02-26

THE FOLLOWING TABLE INDICATES AREAS WHICH WERE EXAMINED IN DETAIL, THE IDENTIFIED PROBLEM AREAS, AND SUPPORT DOCUMENTATION ATTACHMENTS:

	AREAS EXAMINED IN DETAIL (CHECK (V) IF YES OR FOOTNOTE LETTER FOR COMMENTS BELOW)					PROBLEM AREAS IDENTIFIED (CHECK (V) IF YES OR FOOTNOTE NUMBER FOR COMMENTS BELOW)					SUPPORT DOCUMENTATION ATTACHMENTS (CHECK (V) IF YES OR IDENTIFY ATTACHMENT NO.)				
	ALL APPLICABLE ANALYSES	ICP OR A.A. METALS	FURNACE METALS	COLD VAPOR MERCURY	CYANIDE	ALL APPLICABLE ANALYSES	ICP OR A.A. METALS	FURNACE METALS	COLD VAPOR MERCURY	CYANIDE	ALL APPLICABLE ANALYSES	ICP OR A.A. METALS	FURNACE METALS	COLD VAPOR MERCURY	CYANIDE
HOLDING TIMES	✓														
BLANK ANALYSIS RESULTS	✓														
MATRIX SPIKES (PRE-DIGESTION)	✓														
DUPLICATES	✓														
QUANTITATION OF RESULTS	✓														
DETECTION LIMITS/SENSITIVITY	✓														
INITIAL CALIBRATIONS	✓														
CONTINUING CALIBRATIONS	✓														
LABORATORY CONTROL STANDARDS	✓														
ICP LINEAR RANGE ANALYSIS	✓														
ICP INTERFERENCE CHECKS	✓														
ICP SERIAL DILUTIONS	✓														
GFAA POST-DIGESTION SPIKES	✓														
GFAA DUPLICATE BURNS	✓														
GFAA STANDARD ADDITIONS	✓														
OTHERS	✓														

COMMENTS:

SUMMARY OF
BLANK ANALYSES

(Highest values for each category)
(Units = ug/l)

Case: _____
SDGs: _____
_____
_____

Metal	INITIAL CALIB. BLANKS			CONT. CALIB. BLANKS			PREP. BLANKS			FIELD BLANKS		
	AQ SDG# MCJ502	FILT SDG# MC	SOL SDG# MC	AQ SDG# MCJ502	FILT SDG# MC	SOL SDG# MC	AQ SDG# MCJ502	FILT SDG# MC	SOL SDG# MC	AQ SPL# MCJ524	FILT SPL# MC	SOL SPL#
Al		X			X			X		(15.1)	X	X
As		X			X			X		(5.4)	N/A	N/A
Sb		X			X			X			N/A	
Ba		X			X			X				
Be		X			X			X				
Cd		X			X			X				
Ca				7.8						(29.1)		
Cr												
Co												
Cu												
Fe										(12.5)		
Pb												
Mg										(42.6)		
Mn												
Hg												
Ni												
K												
Se			2.2	2.3		2.5			(2.7)			
Ag												
Na												
Tl	2.1		2.1	4.0		(4.0)						
V												
Zn										(15.8)		

Highest values for each metal (unfiltered aqueous and solids) are circled and are applied to ***all*** samples. FILT field blank results apply ***only*** to filtered samples.

Comments: _____
_____
_____

SUPPORT DOCUMENTATION
for SDG MCJE02
includes (aqueous ~~solid~~) samples

MCJE02-10, MCJE24

KEYSTONE D.C.# 17744-3- 5

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2B
CRDL STANDARD FOR AA AND ICP

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

AA CRDL Standard Source: EMSL-LV

ICP CRDL Standard Source: EMSL-LV

Concentration Units: ug/L

	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
Analyte	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony				120.0	124.40	103.7	123.33	102.8
Arsenic	10.0	9.10	91.0					
Barium								
Beryllium				10.0	10.36	103.6	10.08	100.8
Cadmium				10.0	10.28	102.8	10.28	102.8
Calcium								
Chromium				20.0	19.35	96.8	20.84	104.2
Cobalt				100.0	103.49	103.5	100.28	100.3
Copper				50.0	51.14	102.3	51.64	103.3
Iron								
Lead	3.0	2.40	80.0					
Magnesium								
Manganese				30.0	31.00	103.3	30.10	100.3
Mercury								
Nickel				80.0	85.81	107.3	70.36	87.9
Potassium								
Selenium	5.0	5.20	104.0					
Silver				20.0	19.36	96.8	19.06	95.3
Sodium								
Thallium								
Vanadium				100.0	101.70	101.7	101.70	101.7
Zinc				40.0	45.63	114.1	44.94	112.3

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3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	14.0	U	14.0	U	14.0	U	14.0	U	14.000	U	P
Antimony	30.0	U	30.0	U	30.0	U	30.0	U	30.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	F
Barium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	1.000	U	P
Cadmium	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Calcium	7.0	U	7.0	U	7.0	U	7.0	U	7.000	U	P
[illegible]omium	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
[illegible]balt	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	P
Copper	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Iron	6.0	U	6.0	U	6.0	U	6.0	U	6.000	U	P
Lead	1.0	U	1.0	U	1.0	U	-1.0	B	1.000	U	F
Magnesium	37.0	U	37.0	U	37.0	U	37.0	U	37.000	U	P
Manganese	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.200	U	CV
Nickel	22.0	U	22.0	U	22.0	U	22.0	U	22.000	U	P
Potassium	722.0	U	722.0	U	722.0	U	722.0	U	722.000	U	P
Selenium	2.0	U	2.0	U	2.0	U	2.3	B	2.000	U	F
Silver	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Sodium	30.0	U	30.0	U	30.0	U	30.0	U	30.000	U	P
Thallium	2.1	B	2.0	U	2.0	U	4.0	B	2.000	U	F
Vanadium	4.0	U	4.0	U	4.0	U	4.0	U	4.000	U	P
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	2.000	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	AS

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3
BLANKS

b Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			14.0	U							P
Antimony			30.0	U							P
Arsenic			2.0	U	2.3	B	2.0	U			F
Barium			1.0	U							P
Beryllium			1.0	U							P
Cadmium			3.0	U							P
Calcium			7.8	B							P
omium			3.0	U							P
Cobalt			4.0	U							P
Copper			3.0	U							P
Iron			6.0	U							P
Lead			-1.2	B	-1.5	B	-1.5	B			F
Magnesium			37.0	U							P
Manganese			2.0	U							P
Mercury											
Nickel			22.0	U							P
Potassium			722.0	U							P
Selenium			2.0	U	2.0	U	2.0	U			F
Silver			2.0	U							P
Sodium			30.0	U							P
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium			4.0	U							P
Zinc			2.0	U							P
Cyanide											

KEYSTONE D.C.# 17744-3-6

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3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic			2.0	U							F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			-1.7	B							F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium			2.8	B	2.0	U	2.0	U			F
Silver											
Sodium											
Thallium											
Vanadium											
Zinc											
Cyanide											

KEYSTONE D.C.# 17744-3- 7

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4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

ICP ID Number: TJA61 ICS Source: EPALV90

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Aluminum	540055	536472	496982	498526.8	92.9	490764	500246.4	93.2
Antimony			22	-49.4		25	7.5	
Arsenic								
Barium		502	12	456.3	90.9	11	456.1	90.9
Beryllium		480	1	472.6	98.5	1	474.2	98.8
Cadmium		907	-2	868.8	95.8	-4	873.0	96.2
Calcium	494040	512228	503913	505909.1	98.8	501572	508606.9	99.3
Chromium	21	529	16	493.2	93.2	17	493.2	93.2
Cobalt		477	11	441.0	92.4	13	439.7	92.2
Copper		543	-20	528.8	97.4	-21	531.3	97.8
Iron	206236	199845	188128	188247.7	94.2	186432	188684.2	94.4
Lead								
Magnesium	531358	527530	515568	517732.0	98.1	509709	519827.5	98.5
Manganese	34	496	-33	451.2	91.0	-34	454.3	91.6
Mercury								
Nickel		940	23	858.5	91.3	19	851.2	90.6
Potassium			-1312	-989.2		-1323	-1290.3	
Selenium								
Silver		960	-38	859.8	89.6	-36	863.3	89.9
Sodium			1764	1767.7		1730	1760.6	
Thallium								
Vanadium		509	33	481.3	94.6	33	486.9	95.6
Zinc	216	1208	218	1160.2	96.0	218	1165.7	96.5

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5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.
MCJE07S

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix: WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	2681.0000		1089.6200		2000.00	79.6		P
Antimony	75-125	447.9800		30.0000	U	500.00	89.6		P
Arsenic	75-125	50.4000		7.2000	B	40.00	108.0		F
Barium	75-125	1764.9399		65.3500	B	2000.00	85.0		P
Beryllium	75-125	47.1700		1.0000	U	50.00	94.3		P
Cadmium	75-125	46.6200		3.0000	U	50.00	93.2		P
Calcium									NR
Chromium	75-125	177.7200		3.0000	U	200.00	88.9		P
Cobalt	75-125	442.8800		4.0000	U	500.00	88.6		P
Copper	75-125	226.9300		4.9600	B	250.00	88.8		P
Iron	75-125	2252.9500		930.4400	SR≈SA	1000.00	132.2	OK	N P
Lead	75-125	19.7000		1.1000	B	20.00	93.0		F
Magnesium									NR
Manganese	75-125	495.6600		51.6700		500.00	88.8		P
Mercury	75-125	1.0000		0.2000	U	1.00	100.0		CV
Nickel	75-125	441.9000		22.0000	U	500.00	88.4		P
Potassium									NR
Selenium	75-125	10.6000		2.0000	U	10.00	106.0		F
Silver	75-125	41.9400		2.0000	U	50.00	83.9		P
Sodium									NR
Thallium	75-125	50.8000		2.0000	U	50.00	101.6		F
Vanadium	75-125	442.8300		4.0000	U	500.00	88.6		P
Zinc	75-125	477.7300		27.6800		500.00	90.0		P
Cyanide	75-125	97.1700		10.0000	U	100.00	97.2		AS

Comments:

Metals Se, As
IDLs 2.2 ug/l
U = < IDL

17744
SPGMCJTE02

Graphite Furnace Spike Recovery Evaluation Form

Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported ug/l
MCJTE02	6.2	55			2.0 low	2.0 ✓
03	ND	105				2U ✓
04	2.8	55			ND	2U ✓
05	2.0	99				2.0 ✓
06	2.0	107				2.0 ✓
07	~~1.9~~ ND	108				2U ✓
07D	ND	94				2U ✓
07S	10.6	—				106 %
08	ND	93				2U
09	2.8	81	~~No dil~~ 2.5	86		2.5 ✓
10	3.3	78				
24	ND	87				
MCJTE02	10.8	106				10.8 ✓
03	5.6	132	~~No dil~~ 8.7	86		8.1 ✓
04	5.8	107				5.8 ✓
05	6.8	101				6.8 ✓
06	7.2	105				7.2 ✓
07	7.2	94				7.2 ✓
07D	6.6	99				6.6 ✓
07S	50.4	—				108 %
08	8.9	104				8.9 ✓
09	6.7	107				6.7 ✓
10	6.4	89				6.4
24	5.4	82				5.4 ✓

Se

As

Metals Pb, Tl
IDLs 1.2 ug/l
U = < IDL

17744
SDGMCJE02

Graphite Furnace Spike Recovery Evaluation Form

Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported ug/l
MCJE02	ND	94				1 U
03	ND	104				↓
04	ND	108				
05	ND	120				↓
06	22	119.			9.5x2	19.0 ✓ (23.5
07	1.1	106				1.1 ✓
07D	1.5	111				1.5 ✓
07S	19.7	-				93 % (85%
08	59.9	97				59.9 ✓ 71.5
09	N.D	100				1 U
10	2.7	105				2.7 ✓
24	ND	98				1 U
MCJE02	ND	105				2 U
03	ND	104				↓
04	ND	108				
05	ND	104				
06	ND	105				
07	ND	100				
07D	ND	109				↓
07S	50.8	—				102 %
08	ND	108				2 U
09	ND	105				↓
10	ND	111				
24	ND	105				↓

Pb

Tl

Pb ICP IDL = 25 ug/l

KEYSTONE D.C.# 17744-3- 9

ORIGINAL (Red.)

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5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.: MCJE07A

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron		2885.46		930.44		1900.0	102.9		P
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

U.S. EPA - CLP

6
DUPLICATES

EPA SAMPLE NO.
MCJE07D

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		1089.6200		1115.5200		2.3		P
Antimony		30.0000	U	30.0000	U			P
Arsenic		7.2000	B	6.6000	B	8.7		F
Barium		65.3500	B	66.0400	B	1.1		P
Beryllium		1.0000	U	1.0000	U			P
Cadmium		3.0000	U	3.0000	U			P
Calcium	5000.0	14513.1201		14709.2402		1.3		P
Chromium		3.0000	U	3.0000	U			P
Cobalt		4.0000	U	4.0000	U			P
Copper		4.9600	B	4.4600	B	10.6		P
Iron		930.4400		926.0000		0.5		P
Lead		1.1000	B	1.5000	B	30.8		F
Magnesium	5000.0	5787.0801		5925.9600		2.4		P
Manganese	15.0	51.6700		52.1200		0.9		P
Mercury		0.2000	U	0.2000	U			CV
Nickel		22.0000	U	22.0000	U			P
Potassium		2268.8101	B	2322.5701	B	2.3		P
Selenium		2.0000	U	2.0000	U			F
Silver		2.0000	U	2.0000	U			P
Sodium	5000.0	6152.1001		6300.7798		2.4		P
Thallium		2.0000	U	2.0000	U			F
Vanadium		4.0000	U	4.0000	U			P
Zinc	20.0	27.6800		27.6300		0.2		P
Cyanide		10.0000	U	10.0000	U			AS

ORIGINAL (Red)

KEYSTONE D.C.# 17744-3- 12

U.S. EPA - CLP

8

STANDARD ADDITION RESULTS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q	
MCJE06	PB	0.031	5.00	0.047	10.00	0.062	15.00	0.080	9.5	0.9993		
MCJE02	SE	0.017	5.00	0.027	10.00	0.052	15.00	0.091	2.0	0.9672	+	✓
MCJE02	SE	0.007	5.00	0.025	10.00	0.050	15.00	0.041	4.6	0.8670	+	
MCJE03	SE	0.005	5.00	0.040	10.00	0.070	15.00	0.115	0.5	0.9965		✓
MCJE03	SE	0.005	5.00	0.020	10.00	0.043	15.00	0.065	0.7	0.9961		✓
MCJE04	SE	0.003	5.00	0.038	10.00	0.055	15.00	0.138	0.5	0.9535	+	✓
MCJE04	SE	0.011	5.00	0.024	10.00	0.054	15.00	0.054	3.7	0.9446	+	

Lab reported as Jd not 2 ug/L

0.007 suggests sample is ND, not 4.6

High

Same

MCJE02, 03, and 04 are potable well samples and should not have serious matrix effects. This, coupled with erratic response could suggest analytical malfunction or misspiking.

FORM VIII - IN

3/90

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9

ICP SERIAL DILUTIONS

EPA SAMPLE NO.

MCJE07L

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M	
Aluminum	1089.62		822.15	B	24.5	E	P	
Antimony	30.00	U	150.00	U			P	
Arsenic							NR	
Barium	65.35	B	65.70	B	0.5		P	
Beryllium	1.00	U	5.00	U			P	
Cadmium	3.00	U	15.00	U			P	
Calcium	14513.12		15280.20	B	5.3		P	
Chromium	3.00	U	15.00	U			P	
Cobalt	4.00	U	20.00	U			P	
Copper	4.96	B	15.00	U	100.0		P	
Iron	930.44		767.70		17.5	E	P	
Lead							NR	
Magnesium	5787.08		6042.40	B	4.4		P	
Manganese	51.67		51.65	B	0.0		P	
Mercury							NR	
Nickel	22.00	U	110.00	U			P	
* Potassium	2268.81	B	4408.55	B	94.3		P	ok *
Selenium							NR	
Silver	2.00	U	10.00	U			P	
Sodium	6152.10		6433.75	B	4.6		P	
Thallium							NR	
Vanadium	4.00	U	20.00	U			P	
Zinc	27.68		75.95	B	174.4		P	ok, both (B)

$K \cdot \left(\frac{S-I}{5}\right) < IDL$, no impact

ORIGINAL
(Red)

KEYSTONE D.C.# 17744-3-14

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

ICP ID Number: Date: 02/18/92

Flame AA ID Number:

Furnace AA ID Number: PE3030Z

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium	276.80	BZ	10	2.0	F
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

ICP ID Number: TJA61 Date: 02/10/92

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	14.0	P
Antimony	206.80		60	30.0	P
Arsenic			10		NR
Barium	493.40		200	1.0	P
Beryllium	313.00		5	1.0	P
Cadmium	228.80		5	3.0	P
Calcium	317.80		5000	7.0	P
Chromium	267.70		10	3.0	P
Cobalt	228.60		50	4.0	P
Copper	324.70		25	3.0	P
Iron	259.90		100	6.0	P
Lead			3		NR
Magnesium	279.00		5000	37.0	P
Manganese	257.60		15	2.0	P
Mercury			0.2		NR
Nickel	231.60		40	22.0	P
Potassium	766.40		5000	722.0	P
Selenium			5		NR
Silver	328.00		10	2.0	P
Sodium	588.90		5000	30.0	P
Thallium			10		NR
Vanadium	292.40		50	4.0	P
Zinc	213.80		20	2.0	P

Comments:

FORM X - IN

ORIGINAL
(Red)

U.S. EPA - CLP

10
Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

ICP ID Number: Date: 02/14/92

Flame AA ID Number:

Furnace AA ID Number: PE560

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	283.30	BD	3	1.0	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

ICP ID Number: Date: 01/15/92

Flame AA ID Number: MAS50A

Furnace AA ID Number:

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.2	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

ICP ID Number: Date: 02/22/92

Flame AA ID Number:

Furnace AA ID Number: TJASH21

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	197.30	BS	10	2.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BS	5	2.0	F
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

FORM X - IN

SUPPORT DOCUMENTATION
for SDG MCJE11
includes (~~aqueous~~, solid) samples

MCJE-11-23, 26

ORIGINAL

KEYSTONE D.C.# 17744-3- 5

U.S. EPA - CLP

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

AA CRDL Standard Source: EMSL-LV

ICP CRDL Standard Source: EMSL-LV

Concentration Units: ug/L

	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
Analyte	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony				120.0	122.02	101.7	121.07	100.9
Arsenic	10.0	9.30	93.0					
Barium								
Beryllium				10.0	9.98	99.8	9.74	97.4
Cadmium				10.0	8.88	88.8	10.78	107.8
Calcium								
Chromium				20.0	20.26	101.3	20.26	101.3
Cobalt				100.0	98.26	98.3	95.35	95.3
Copper				50.0	51.14	102.3	48.77	97.5
Iron								
Lead	3.0	3.10	103.3					
Magnesium								
Manganese				30.0	29.28	97.6	28.86	96.2
Mercury								
Nickel				80.0	76.18	95.2	81.63	102.0
Potassium								
Selenium	5.0	6.40	128.0					
Silver				20.0	18.58	92.9	16.89	84.4
Sodium								
Thallium	10.0	11.90	119.0					
Vanadium				100.0	98.64	98.6	95.58	95.6
Zinc				40.0	43.11	107.8	42.57	106.4

U.S. EPA - CLP

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	14.0	U	14.0	U	14.0	U	14.0	U	2.800	U	P
Antimony	30.0	U	30.0	U	30.0	U	30.0	U	6.000	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	F
Barium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.200	U	P
Cadmium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Calcium	7.0	U	7.0	U	7.0	U	7.0	U	1.400	U	P
Chromium	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Cobalt	4.0	U	4.0	U	4.0	U	4.0	U	0.800	U	P
Copper	3.0	U	3.0	U	3.0	U	3.0	U	0.600	U	P
Iron	6.0	U	6.0	U	6.0	U	6.0	U	1.200	U	P
Lead	1.0	U	1.0	U	1.0	U	-1.0	B	0.200	U	F
Magnesium	37.0	U	37.0	U	37.0	U	37.0	U	7.400	U	P
Manganese	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.100	U	CV
Nickel	22.0	U	22.0	U	22.0	U	22.0	U	4.400	U	P
Potassium	722.0	U	722.0	U	722.0	U	722.0	U	144.400	U	P
Selenium	2.2	B	2.4	B	2.0	U	2.5	B	0.540	B	F
Silver	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
Sodium	30.0	U	30.0	U	30.0	U	30.0	U	6.000	U	P
Thallium	2.1	B	2.0	U	2.0	U	4.0	B	0.400	U	F
Vanadium	4.0	U	4.0	U	4.0	U	4.0	U	0.800	U	P
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	0.400	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	0.500	U	AS

ORIGINAL
(Red)

U.S. EPA - CLP

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum			14.0	U							P
Antimony			30.0	U							P
Arsenic			2.0	U	2.3	B	2.0	U			F
Barium			1.0	U							P
Beryllium			1.0	U							P
Cadmium			3.0	U							P
Calcium			7.0	U							P
Chromium			3.0	U							P
Cobalt			4.0	U							P
Copper			3.0	U							P
Iron			6.0	U							P
Lead			1.0	U	1.0	U	1.0	U			F
Magnesium			37.0	U							P
Manganese			2.0	U							P
Mercury											
Nickel			22.0	U							P
Potassium			722.0	U							P
Selenium			2.0	U	2.0	B	2.0	U			F
Silver			2.0	U							P
Sodium			30.0	U							P
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium			4.0	U							P
Zinc			2.0	U							P
Cyanide											

U.S. EPA - CLP

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic			2.0	U	2.0	U	-2.2	B			F
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead			1.0	U	-1.5	B	-1.3	B			F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium			2.0	U	2.8	B	2.0	U			F
Silver											
Sodium											
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium											
Zinc											
Cyanide											

ORIGINAL
(Red)

U.S. EPA - CLP

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic			2.0	U	2.0	U	2.0	U			F
Barium											
Beryllium											
Cadmium											
[illegible]lcium											
[illegible]romium											
Cobalt											
Copper											
Iron											
Lead			1.0	U	-1.1	B					F
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium			2.0	U	2.0	U	2.0	U			F
Silver											
Sodium											
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium											
Zinc											
Cyanide											

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium											
Zinc											
Cyanide											

ORIGINAL
(Red)

U.S. EPA - CLP

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
[illegible]lcium											
[illegible]romium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium											
Zinc											
Cyanide											

U.S. EPA - CLP

3
BLANKS

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											
Antimony											
Arsenic											
Barium											
Beryllium											
Cadmium											
Calcium											
Chromium											
Cobalt											
Copper											
Iron											
Lead											
Magnesium											
Manganese											
Mercury											
Nickel											
Potassium											
Selenium											
Silver											
Sodium											
Thallium			2.0	U	2.0	U	2.0	U			F
Vanadium											
Zinc											
Cyanide											

ORIGINAL
(Red)

KEYSTONE D.C.# 17744-3- 7

U.S. EPA - CLP

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

ICP ID Number: TJA61 ICS Source: EPALV90

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial %R	Final Found Sol. A	Final Found Sol. AB	Final %R
Aluminum	540055	536472	490703	498407.6	92.9	492685	489829.9	91.3
Antimony			14	7.0		29	-14.8	
Arsenic								
Barium		502	12	453.8	90.4	12	439.1	87.5
Beryllium		480	0	449.4	93.6	0	432.6	90.1
Cadmium		907	-2	867.8	95.7	-2	857.1	94.5
Calcium	494040	512228	490112	497994.1	97.2	488999	485989.6	94.9
Chromium	21	529	19	482.0	91.1	17	468.5	88.6
Cobalt		477	11	431.7	90.5	12	419.8	88.0
Copper		543	-21	516.7	95.1	-21	502.0	92.4
Iron	206236	199845	181855	185392.4	92.8	179605	179494.0	89.8
Lead								
Magnesium	531358	527530	501252	510837.4	96.8	508379	506125.0	95.9
Manganese	34	496	-30	446.2	90.0	-28	433.4	87.4
Mercury								
Nickel		940	18	833.2	88.6	2	792.0	84.3
Potassium			-1242	-1241.7		-675	-1082.7	
Selenium								
Silver		960	-38	869.1	90.5	-38	863.7	90.0
Sodium			1636	1694.6		1687	1684.4	
Thallium								
Vanadium		509	35	476.8	93.7	38	468.4	92.0
Zinc	216	1208	212	1146.4	94.9	216	1135.3	94.0

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.
MCJE18S

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix: SOIL Level (low/med): LOW

% Solids for Sample: 76.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	121.7868		7.8947	U	131.58	92.6		P
Arsenic	75-125	16.8684		6.6579		10.53	97.0		F
Barium	75-125	531.6974		52.7026		526.32	91.0		P
Beryllium	75-125	13.0105		0.5105	B	13.16	95.0		P
Cadmium	75-125	13.0158		0.7895	U	13.16	98.9		P
Calcium									NR
Chromium	75-125	63.6000		10.6316		52.63	100.6		P
Cobalt	75-125	128.4421		6.3658	B	131.58	92.8		P
Copper	75-125	73.5263		9.9684		65.79	96.6		P
Iron									NR
Lead		239.4737		181.5789		5.26	1100.7		F
Magnesium									NR
Manganese	75-125	429.7684		317.6579		131.58	85.2		P
Mercury	75-125	0.6579		0.1316	U	0.66	99.7		CV
Nickel	75-125	129.0711		7.3526	B	131.58	92.5		P
Potassium									NR
Selenium	75-125	2.6579		0.6316	B	2.63	77.0		F
Silver	75-125	10.2974		0.5263	U	13.16	78.2		P
Sodium									NR
Thallium	75-125	12.2105		0.5263	U	13.16	92.8		F
Vanadium	75-125	140.6500		19.5842		131.58	92.0		P
Zinc	75-125	289.7684		168.5632		131.58	92.1		P
Cyanide	75-125	6.3737		0.6579	U	6.58	96.9		AS

Comments:

ORIGINAL
(red)

Metal Pb
IDL 1 ug/l
U = < IDL

17744
SDG MCJE11

Graphite Furnace Spike Recovery Evaluation Form

Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported mg/kg	IDL
MCJE11	301. (hi)	53 (hi)	5.7x50	90 hi CV		113. ✓	230
12	154	62	12.4x10	84	→ 7.9x20	62.7 ✓	95.
13	113.	71	24.8x10	74	5.0x20	33.3 ✓	72.
14	198.2	70	8.7x20	79	5.7x40	105.5 ✓	145.
15	870	—	18.7x100	74	7.3x200	349. ✓	186.
16	hi	hi	83.x100	125 (hi)		4810 ✓	4,20
17	107. ↓	50	8.6x10	84	3.9x20	35.7 ✓	3
18	90.5	84	6.9x10	89		18.2 ✓	32.
18D	92.6	71	7.3x10	113		19.2 ✓	34.
18S	104.1 (hi)	—	9.1x10			110. %	(90)
19	70.3	99				16.9 ✓	24.
20	902 (hi)	92 (hi)	8.2x100	106		253. ✓	413.
21	(hi) ↓	hi	6.7x200	102		358. ✓	360.
22	87.4	101	8.3x10	116 (not Pb)		22.2 ✓	66.
23	105.4	100 ↓	7.8x10	113		20.2 ✓	40.
26	60.6	87				17.8 ✓	64.
MCJE11PL			5.8x50	115		113	
MCJE16PL			52.5x200	88		4810	

ICP IDL = 25. ug/l

Metal As
IDL 2 ug/l
U = < IDL

17744
SDG MCJ211

Graphite Furnace Spike Recovery Evaluation Form

	Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported mg/kg	ICP
02	MCJE11	18.0	96.				7.0 ✓	B
03	12	15.3	96				6.1 ✓	B
04	13	23.6	94				7.8 ✓	B
05	14	19.1	81	F		8.3.	3.8	B
06	15	hi	hi	18.6x50	116.	31.1x50	372 ✓	360.
07	16	52.1	150			455.3 (10%)	62.4 ✓	J
	17	23.6	72			16.1	3.9 ✓	B
09	18	25.3	93				6.7 ✓	B
	18D	26.0	78			27.8	7.3 ✓	
	18S	64.1	—				97 %	
	19	22.4	104				5.4 ✓	B
	20	29.1	85				9.0 ✓	
14	21	99.0	hi	23.2x5	126	24.9 x5	33.3 ✓	
	22	38.8	100.				10.4 ✓	
	23	21.5	110.				5.6 ✓	B
17	26	13.4	99 (80)	11.4	129		3.4 ✓	B

Metal Se
IDL 2 ug/l
U = < IDL

ORIGINAL (RED)

17744
SDG MCJE11

Graphite Furnace Spike Recovery Evaluation Form

Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported mg/kg	
MCJE11	3.8	105				1.5 ✓	B
12	6.3	57			1.7 (2U)	U	
13	2.9	78				0.96 ✓	B
14	4.0	75			1.5 (2U)	U ✓	
06 15	5.1	0	5.4x5	78	1.55x5 (2U)	5x U	
16	ND	89				U	
17	2.9	(71)				0.71 ✓	B
18	2.7	84				0.63 ✓	B
18D	ND	99				U	
18S	10.1	—				74 %	
19	2.5	86				0.60 ✓	B
20	3.1	(62)				0.96 ✓	B
21	ND	81				U	
15 22	2.2	(54)				0.59 ✓	B
23	ND	86				U	
26	2.2	142	2.8	95		0.82 ✓	

Metal Tl
IDL 2 ug/l
U = < IDL

17744
SDG MCJE11

Graphite Furnace Spike Recovery Evaluation Form

Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported mg/Kg
MCJE11	ND	105				U
12	ND	104				
13	ND	103				
14	ND	99				
15	ND	106				
16	ND	104				
17	ND	104				
18	ND	105				
18D	ND	103				
18S	46.4	—				93 %
19	ND	100				U
20	ND	98				
21	ND	102				
22	ND	104				
23	ND	109				
26	ND	109				

ORIGINAL

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KEYSTONE D.C.# 17744-3- /2

8

STANDARD ADDITION RESULTS

b Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q
MCJE14	AS	0.043	5.00	0.077	10.00	0.095	15.00	0.123	8.9	0.9936	+
MCJE14	AS	0.043	5.00	0.072	10.00	0.100	15.00	0.123	8.3	0.9986	✓
MCJE15	AS	0.080	10.00	0.105	20.00	0.135	30.00	0.156	31.1	0.9979	
MCJE16	AS	0.048	10.00	0.072	20.00	0.100	30.00	0.080	45.5	0.7442	+
MCJE16	AS	0.049	10.00	0.076	20.00	0.099	30.00	0.076	57.1	0.6567	+
MCJE17	AS	0.040	10.00	0.067	20.00	0.094	30.00	0.116	16.1	0.9988	✓
MCJE18D	AS	0.060	15.00	0.095	30.00	0.118	45.00	0.160	27.8	0.9943	+
MCJE18D	AS	0.055	15.00	0.098	30.00	0.120	45.00	0.151	28.8	0.9917	+
MCJE21	AS	0.053	10.00	0.082	20.00	0.105	30.00	0.120	25.2	0.9903	+
MCJE21	AS	0.055	10.00	0.075	20.00	0.098	30.00	0.120	24.9	0.9996	✓
MCJE12	PB	0.022	5.00	0.036	10.00	0.049	15.00	0.064	7.9	0.9996	✓
MCJE13	PB	0.015	5.00	0.032	10.00	0.046	15.00	0.062	5.0	0.9994	
MCJE14	PB	0.016	5.00	0.028	10.00	0.044	15.00	0.056	5.7	0.9983	
MCJE15	PB	0.020	5.00	0.036	10.00	0.050	15.00	0.063	7.3	0.9989	
MCJE17	PB	0.012	5.00	0.027	10.00	0.043	15.00	0.058	3.9	0.9999	
MCJE12	SE	0.003	5.00	0.019	10.00	0.025	15.00	0.041	1.7	0.9864	+
MCJE12	SE	0.005	5.00	0.007	10.00	0.028	15.00	0.035	0.8	0.9541	+
MCJE14	SE	0.005	5.00	0.016	10.00	0.029	15.00	0.044	1.5	0.9976	✓
MCJE14	SE	0.012	5.00	0.024	10.00	0.042	15.00	0.055	3.8	0.9971	
MCJE15	SE	0.004	5.00	0.015	10.00	0.030	15.00	0.040	1.5	0.9972	

see QF's on pos for

FORM VIII - IN

3/90

000042

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6
DUPLICATES

EPA SAMPLE NO.
MCJE18D

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Level (low/med): LOW

% Solids for Sample: 76.0 % Solids for Duplicate: 73.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		3397.4634		3491.8000		2.7		P
Antimony		7.8947	U	7.8947	U			P
Arsenic	2.6	6.6579		7.3081		9.3		F
Barium	52.6	52.7026		51.8816	B	1.6		P
Beryllium		0.5105	B	0.5763	B	12.1		P
Cadmium		0.7895	U	0.7895	U			P
Calcium	1315.8	2108.6553		2130.3291		1.0		P
Chromium	2.6	10.6316		10.9921		3.3		P
Cobalt		6.3658	B	6.2395	B	2.0		P
Copper	6.6	9.9684		10.2184		2.5		P
Iron		10750.5322		10928.9844		1.6		P
Lead		181.5789		192.1053		5.6		F
Magnesium		936.6500	B	971.0816	B	3.6		P
Manganese		317.6579		310.3868		2.3		P
Mercury		0.1316	U	0.1316	U			CV
Nickel		7.3526	B	6.1237	B	18.2		P
Potassium		397.3369	B	384.2658	B	3.3		P
Selenium		0.6316	B	0.5263	U	200.0		F
Silver		0.5263	U	0.5263	U			P
Sodium		43.5237	B	49.1895	B	12.2		P
Thallium		0.5263	U	0.5263	U			F
Vanadium	13.2	19.5842		19.7158		0.7		P
Zinc		168.5632		169.0105		0.3		P
Cyanide		0.6579	U	0.6579	U			AS

KEYSTONE D.C.# 17744-3- 13

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ICP SERIAL DILUTIONS

EPA SAMPLE NO.

MCJE18L

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	12910.36		12943.00		0.3		P
Antimony	30.00	U	150.00	U			P
Arsenic							NR
Barium	200.27		200.55	B	0.1		P
Beryllium	1.94	B	5.00	U	100.0		P
Cadmium	3.00	U	15.00	U			P
Calcium	8012.89		8317.10	B	3.8		P
Chromium	40.40		39.20	B	3.0		P
Cobalt	24.19	B	20.55	B	15.0		P
Copper	37.88		35.50	B	6.3		P
Iron	40852.02		41144.55		0.7		P
Lead							NR
Magnesium	3559.27	B	3600.75	B	1.2		P
Manganese	1207.10		1222.75		1.3		P
Mercury							NR
Nickel	27.94	B	110.00	U	100.0		P
Potassium	1509.88	B	3610.00	U	100.0		P
Selenium							NR
Silver	2.00	U	10.00	U			P
Sodium	165.39	B	240.90	B	45.7		P
Thallium							NR
Vanadium	74.42		76.45	B	2.7		P
Zinc	640.54		662.70		3.5		P

* $\left(\frac{S-I}{5}\right) < IDL$, no impact

FURNACE-AA BENCH SHEET

KEYSTONE LAB-HOUSTON

D.C. # _____-08

ELEMENT Se INSTRUMENT TSA-21 CRDL 5

DATE 2-23-92 ANALYST _____ IDL 2

Note: Use proper units and flags for final concentration

CUP NO	SAMPLE OR STD ID	CLIENT ID NO.	INITIAL DATA			DILUTION DATA				MSA DATA		DIG FACT	ANALYTE CONC	
			AVG CONC	RPD	ANAL SPIKE REC %	DIL FACT	AVG CONC	RPD	ANAL SPIKE REC %	DIL FACT	CALC CONC INTCP		UG/L	MG/KG
27		A	11.1	11.44	86%								—	—
28		MCSE20	3.1										—	0.6 W
29		A	9.3	3.01	62%								—	—
30		MCSE21	0.9										—	0.4 W
31		A	8.4	9.62	81%								—	—
32		MCSE22	2.7	———	———	——— lab misread as				2.7; shoulder		2.2	—	0.4 W
33		A	7.6	16.71	54%								—	—
34		MCSE23	1.9										—	0.4
35		A	8.4	14.76	86%								—	—
36	0001132	CCV	47.8	4.28									47.8 50.3	96%
37		CCB	0.6										2	—
38		MCSE24	0.7			1X	2.8							0.6 M
39		A	14.2	40.8		1+	12.3	20.08	85%				—	—

		Se-S	As-S	
SN= 000031				
Conc	1	008.7	HIGH	14A
Mean		008.7	HIGH	
P/H		0.047	0.254	
Conc	2	007.6	HIGH	
Mean		008.1	HIGH	81% see dil
P/H		0.054	0.237	
		Se-S	As-S	
Mean		008.1	HIGH	
SD		000.8		
RSD		09.62		
		Se-S	As-S	
SN= 000032				
Conc	1	001.0	040.2	15 NYC5E22
Mean		001.0	040.2	
P/H		0.006	0.133	
Conc	2	003.5	037.5	
Mean		002.2	038.8	
P/H		0.005	0.133	0.4W 7.8
		Se-S	As-S	
Mean		002.2	038.8	
SD		001.8	001.9	
RSD		80.00	04.92	
		Se-S	As-S	
SN= 000033				
Conc	1	006.7	060.4	15A
Mean		006.7	060.4	
P/H		0.052	0.189	
Conc	2	008.5	057.5	
Mean		007.6	058.9	
P/H		0.052	0.198	59% 100%
		Se-S	As-S	
Mean		007.6	058.9	
SD		001.3	002.1	
RSD		16.71	03.48	
		Se-S	As-S	
SN= 000034				
Conc	1	002.4	021.1	16 NYC5E23
Mean		002.4	021.1	
P/H		0.005	0.075	
Conc	2	001.5	021.9	
Mean		001.9	021.5	
P/H		0.003	0.088	0.4 4.3
		Se-S	As-S	
Mean		001.9	021.5	
SD		000.6	000.6	
RSD		33.68	02.60	
		Se-S	As-S	
SN= 000035				16A
Conc	1	009.5	046.0	
Mean		009.5	046.0	
P/H		0.059	0.186	
Conc	2	007.7	040.8	86% 100%
Mean		008.6	043.4	
P/H		0.038	0.168	
		Se-S	As-S	
Mean		008.6	043.4	
		001.3	003.7	
RSD		14.76	08.45	

Pb: P.E. 560

H92-01.302

2/26/92

T.N

14:15

-1.6
-1.4
61 -1.5AV ccb 1.0u
-11.85CV
8.6
9.6
62 9.1AV 011 (10x spk) 110% mCJE18 (spk)
8.21CV
8.2
8.2
63 8.2AV 013 (100x) (8.2)(100)(.2) = 164mg/kg mCJE20
0.75CV
29.2
29.5
64 29.3AV +20 105.5% mCJE20A
0.60CV
6.5
6.8
65 6.7AV 014 (200x) (6.7)(200)(.2) = 268mg/kg mCJE21
2.77CV
27.3
26.8
66 27.0AV +20 101.5% mCJE21A
1.48CV
8.6
8.1
67 8.3AV 015 (10x) (8.3)(10)(.2) = 16.6mg/kg mCJE22 W
4.34CV
31.6
31.4
31.5AV +20 116% NO MSA performed mCJE22A
0.44CV
7.5
8.2
69 7.8AV 016 (10x) (7.8)(10)(.2) = 15.6mg/kg mCJE23
6.24CV
31.3
29.8
70 30.5AV +20 113.5% mCJE23A
3.58CV
52.3 15:05
49.9
71 51.1AV ccv 51.1/50.0 = 102.2%
3.33CV
-1.3 15:10
-1.4
72 -1.3AV ccb 1.0u
-0.83CV
5.6
5.9
73 5.8AV 002 (50x) (5.8)(50)(.2) = 58mg/kg mCJE11
4.19CV
28.8
28.8
74 28.8AV +20 115% mCJE11A
0.10CV
52.3
52.7
75 52.5AV 007 (200x) (52.5)(200)(.2) = 2100mg/kg mCJE16
0.46CV

(Pb)

ORIGINAL

H92-07.302
2/26/92
T.N

71.9
68.1
76 70.0AV +20 87.5% MCJE 16A.
3.83CV
49.8 15:35
49.7
77 49.7AV CCV 9 49.7/50.0=99.4%
0.10CV
-1.4 15:40
-0.9
78 -1.1AV CCB 1.0u
-25.50CV

20X
003(2x)
79 0.022+0 MCJE12
80 0.036+5 MCJE12
81 0.049+10 MCJE 12
82 0.064+15 MCJE12

corr = 0.999
Slope = 0.00278
Inter = 0.0219
$x' = (7.87)(20)(.2) =$ ~~3.15~~ 31.5 mg/kg

004(2x) 20X
83 0.015+0 MCJE 13
84 0.032+5 MCJE 13
85 0.046+10 MCJE 13
86 0.062+15 MCJE 13

Corr = 0.999
Slope = 0.0031
Inter = 0.0155
$x' = (5)(20)(.2) =$ ~~2.0~~ 20. mg/kg

005(2x) 40X
87 0.016+0 MCJE 14
88 0.028+5 MCJE 14
89 0.044+10 MCJE 14
90 0.056+15 MCJE 14

corr = 0.998
Slope = 0.00272
Inter = 0.0156
$x' = (5.73)(~~2~~ 40)(.2) =$ ~~2.29~~ 45.8 mg/kg

006(2x) 200X
91 0.020+0 MCJE 15
92 0.036+5 MCJE 15
93 0.050+10 MCJE 15
94 0.063+15 MCJE 15

Corr = 0.998
Slope = 0.00286
Inter = 0.0208
$x' = (7.27)(200)(.2) =$ ~~2.90~~ 290. mg/kg

008(2x) 20X
95 0.012+0 MCJE 17
96 0.027+5 MCJE 17
97 0.043+10 MCJE 17
98 0.058+15 MCJE 17

corr = 0.999
Slope = 0.00308
Inter = 0.0119
$x' = (3.86)(20)(.2) =$ ~~1.54~~ 15.4 mg/kg

17:25
99 50.8 CCV 10 50.8/50.0 = 101.6%
100 -1.1 CCB 17:30 1.0u

PE560 T. Nangle

Daily Log Run For (Pb) by Furnace

2/26/92

BLK 8:00	1	CCV 9:15	33	+20	65	014 (20X)	17:35 CCV
3.0	2	CCB 9:20	34	016	66	+20	17:38 CCB
50.0	3	H92-01-302	35	+20	67	015 (10X)	
100.0 8:20	4	002	36	CCV 12:10	68	+20	
ICV (2X)	5	+20	37	CCB 12:15	69	016 (10X)	
ICB 8:25	6	003	38	017	70	+20	
CCV 8:30	7	+20	39	+20	71	CCV 15:05	
CCB 8:35	8	004	40	002 (50X)	72	CCB 15:10	
CRA	9	+20	41	+20	73	002 (50X)	
PBS	10	005	42	003 (10X)	74	+20	
PBSA	11	+20	43	+20	75	007 (20X)	
LCSS (2X)	12	006	44	004 (10X)	76	+20 15:35	
LCSSA	13	+20	45	+20	77	CCV 15:40	
CCV 9:40	14	CCV 10:15	46	005 (20X)	78	CCB	
CCB 9:10	15	CCB 10:20	47	+20	79	003 (100X 2X) = 20X	
	16	007	48	CCV 13:05	80	+5	
	17	+20	49	CCB 13:10	81	+10	
	18	008	50	006 (100X)	82	+15	
	19	+20	51	+20	83	004 (10X 2X) = 20X	
	20	009	52	007 (100X)	84	+5	
	21	+20	53	+20	85	+10	
	22	010 (Dup)	54	008 (10X)	86	+15	
	23	+20	55	+20	87	005 (2X 20X) = 40X	
	24	011 (Spk)	56	009 (10X)	88	+5	
	25	CCV 11:10	57	+20	89	+10	
	26	CCB 11:15	58	010 (10X Dup)	90	+15	
	27	012	59	+20	91	006 (2X 100X) = 200X	
	28	+20	60	CCV 14:10	92	TW 2/26/92 ~~+10~~ +5	
	29	013	61	CCB 14:15	93	TW 2/26/92 ~~+20~~ 10	
	30	+20	62	011 (Spk 10X)	94	TW 2/26/92 ~~+30~~ +15	
	31	014	63	013 (100X)	95	008 (1X 1X) = 20X	
	32	+20	64	+20	96	+5	
		015		6. Jim		+10	
						+15	

Solution factors for MSA analysis

REVIEWED BY:

USEPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

ICP ID Number: Date: 02/18/92

Flame AA ID Number:

Furnace AA ID Number: PE3030Z

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BZ	5	mfc 3-3-92 ~~2.0~~	F
Silver			10		NR
Sodium			5000		NR
Thallium	276.80	BZ	10	2.0	F
Vanadium			50		NR
Zinc			20		NR

Comments:

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

ICP ID Number: TJA61 Date: 02/10/92

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	14.0	P
Antimony	206.80		60	30.0	P
Arsenic			10		NR
Barium	493.40		200	1.0	P
Beryllium	313.00		5	1.0	P
Cadmium	228.80		5	3.0	P
Calcium	317.80		5000	7.0	P
Chromium	267.70		10	3.0	P
Cobalt	228.60		50	4.0	P
Copper	324.70		25	3.0	P
Iron	259.90		100	6.0	P
Lead			3		NR
Magnesium	279.00		5000	37.0	P
Manganese	257.60		15	2.0	P
Mercury			0.2		NR
Nickel	231.60		40	22.0	P
Potassium	766.40		5000	722.0	P
Selenium			5		NR
Silver	328.00		10	2.0	P
Sodium	588.90		5000	30.0	P
Thallium			10		NR
Vanadium	292.40		50	4.0	P
Zinc	213.80		20	2.0	P

Comments:

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

ICP ID Number: Date: 02/14/92

Flame AA ID Number:

Furnace AA ID Number: PE560

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	283.30	BD	3	1.0	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

10
Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

ICP ID Number: Date: 02/05/92

Flame AA ID Number: MAS50A

Furnace AA ID Number:

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.2	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

U.S. EPA - CLP

10

Instrument Detection Limits (Quarterly)

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

ICP ID Number: Date: 02/12/92

Flame AA ID Number:

Furnace AA ID Number: TJASH21

Analyte	Wavelength (nm)	Background	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	197.30	BS	10	2.0	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BS	5	2.0	F
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR

Comments:

TPO: [ ] ACTION [✓] FYI

Region 3

INORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 17744

LABORATORY KeyTx

SDG NO. MCJE02 (aq)

DATA USER HNUS

SOW 3/90

REVIEW COMPLETION DATE 5/5/92

NO. OF SAMPLES 10 MATRIX aq

REVIEWER [ ] ESD [ ] ESAT [✓] OTHER, CONTRACT/CONTRACTOR HNUS

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	O	O	O	O
2. INITIAL CALIBRATIONS	O	O	O	O
3. CONTINUING CALIBRATIONS	O	O	O	O
4. FIELD BLANKS ("F" = not applicable)	X	O	O	O
5. LABORATORY BLANKS	X	X	O	O
6. ICS	O			
7. LCS	O			
8. DUPLICATE ANALYSIS	O	O	O	O
9. MATRIX SPIKE	O	O	O	O
10. MSA		X		
11. SERIAL DILUTION	X			
12. SAMPLE VERIFICATION	O	O	O	O
13. REGIONAL QC ("F" = not applicable)	M	X	O	O
14. OVERALL ASSESSMENT	X	X	O	O

O = No problems or minor problems that do not affect data usability.
X = No more than *about* 5% of the data points are qualified as either estimated or unusable.
M = More than *about* 5% of the data points are qualified as estimated.
Z = More than *about* 5% of the data points are qualified as unusable.
A = DPO action requested; use in conjunction with one of the above codes.

DPO ACTION ITEMS: Aqueous MSA results for Se in 3 potable well samples were erratic, suggesting analytical malfunction or misspiking. Also, one Se result misreported. ~~no significant / contractual problems~~

AREAS OF CONCERN:

TPO: [X] ACTION [ ] FYI Region 3

INORGANIC REGIONAL DATA ASSESSMENT SUMMARY

CASE NO. 17744 LABORATORY KeyTX

SDG NO. MCJE11 DATA USER HMS

SOW 3/90 REVIEW COMPLETION DATE 5/5/92

NO. OF SAMPLES 14 MATRIX Solid

REVIEWER [ ] ESD [ ] ESAT [X] OTHER, CONTRACT/CONTRACTOR NMS

	ICP	AA	Hg	CYANIDE
1. HOLDING TIMES	O	O	O	O
2. INITIAL CALIBRATIONS	O	O	O	O
3. CONTINUING CALIBRATIONS	O	O	O	O
4. FIELD BLANKS ("F" = not applicable)	X	X	O	O
5. LABORATORY BLANKS	X	X	O	O
6. ICS	O			
7. LCS	O			
8. DUPLICATE ANALYSIS	O	O	O	O
9. MATRIX SPIKE	O	O	O	O
10. MSA		X		
11. SERIAL DILUTION	O			
12. SAMPLE VERIFICATION	O	O	O	O
13. REGIONAL QC ("F" = not applicable)	X	O	O	O
14. OVERALL ASSESSMENT	X	X	O	O

O = No problems or minor problems that do not affect data usability.
X = No more than *about* 5% of the data points are qualified as either estimated or unusable.
M = More than *about* 5% of the data points are qualified as estimated.
Z = More than *about* 5% of the data points are qualified as unusable.
A = DPO action requested; use in conjunction with one of the above codes.

DPO ACTION ITEMS: lab miscalculated 6 Pb results and one Se result. An MSA analysis should have been performed for Pb in one sample where the PDS recov >115%.

AREAS OF CONCERN:

FURNACE-AA BENCH SHEET

KEYSTONE LAB-HOUSTON

D.C. # _____-08

ELEMENT Se INSTRUMENT TSA-21 CRDL 5

DATE 2-23-92 ANALYST _____ IDL 2

Note: Use proper units and flags for final concentration

CUP NO	SAMPLE OR STD ID	CLIENT ID NO.	INITIAL DATA			DILUTION DATA				MSA DATA		DIG FACT	ANALYTE CONC	
			AVG CONC	RPD	ANAL SPIKE REC %	DIL FACT	AVG CONC	RPD	ANAL SPIKE REC %	DIL FACT	CALC CONC INTCP		UG/L	MG/KG
27		A	11.1	11.44	86%								—	—
28		MCSE20	3.1										—	0.6
29		A	9.3	3.01	62%								—	—
30		MCSE21	0.9										—	0.4
31		A	8.4	9.62	81%								—	—
32		MCSE22	2.7	—	—	—	lab misread as			2.7; shoulder		2.2	—	0.4
33		A	7.6	16.71	54%								—	—
34		MCSE23	1.9										—	0.4
35		A	8.4	14.76	86%								—	—
36	0001132	CCV	47.8	4.28									47.8 50.3	96%
37		CCB	0.6										2	—
38		MCSE24	0.7			1X	2.8							0.6
39		A	14.7	40.8		1X	12.3	20.08	95%				—	—

Metal Pb
IDL 1 ug/l
U = < IDL

17744
SDG MCJE11

Graphite Furnace Spike Recovery Evaluation Form

Sample ID	Instr. Level Result ug/l	PDS Recovery %	Diluted Result ug/l	Diluted PDS Recovery %	MSA Result (if needed) ug/l	Final Result Reported mg/kg	IC
MCJE11	301. (hi)	53 (hi)	5.7x50	90 hi CV		113. ✓	230
12	154	62	12.4x10	84	→ 7.9x20	62.7 ✓	95.
13	113.	71	24.8x10	74	5.0x20	33.3 ✓	72
14	198.2	70	8.7x20	79	5.7x40	105.5 ✓	145
15	870	—	18.7x100	74	7.3x200	342. ✓	186
16	hi	hi	83.x100	125 (hi)		4810 ✓	4,2
17	107. ↓	50	8.6x10	84	3.9x20	35.7 ✓	3
18	90.5	84	6.9x10	89	*	18.2 ✓	32.
18D	92.6	71	7.3x10	113		19.2 ✓	34
18S	104.1 (hi)	—	9.1x10			110. %	(90
19	70.3	94				16.9 ✓	24.
20	802 (hi)	92 (hi)	8.2x100	106		253. ✓	413
21	(hi) ↓	hi	6.7x200	102		358. ✓	360
22	87.4	101	8.3x10	116 (NO RE)		22.2 ✓	66
23	105.4	100 ↓	7.8x10	113		20.2 ✓	40
26	60.6	87				17.8 ✓	64.
MCJE11DL			5.8x50	115		113	
MCJE16DL			52.5x200	88		4810	

Circled results have been reported; lab did not take dilution factors into account when calculating results * for MCJE16, lab misplaced decimal.

ICP IDL = 25. ug/l

		Se-S	As-S	
SN= 000031				
Conc	1	008.7	HIGH	14 A
Mean		008.7	HIGH	
P/H		0.047	0.254	
Conc	2	007.6	HIGH	
Mean		008.1	HIGH	81% see dil
P/H		0.054	0.237	
		Se-S	As-S	
Mean		008.1	HIGH	
SD		000.8		
RSD		09.62		
		Se-S	As-S	
SN= 000032				
Conc	1	001.0	040.2	15 MCSE22
Mean		001.0	040.2	
P/H		0.006	0.133	
Conc	2	003.5	037.5	
Mean		002.2	038.8	
P/H		0.005	0.133	0.4W 7.8
		Se-S	As-S	
Mean		002.2	038.8	
SD		001.8	001.9	
RSD		80.00	04.92	
		Se-S	As-S	
SN= 000033				
Conc	1	006.7	060.4	15 A
Mean		006.7	060.4	
P/H		0.052	0.189	
Conc	2	008.5	057.5	
Mean		007.6	058.9	
P/H		0.052	0.198	59% 100%
		Se-S	As-S	
Mean		007.6	058.9	
SD		001.3	002.1	
RSD		16.71	03.48	
		Se-S	As-S	
SN= 000034				
Conc	1	002.4	021.1	16 MCSE23
Mean		002.4	021.1	
P/H		0.005	0.075	
Conc	2	001.5	021.9	
Mean		001.9	021.5	
P/H		0.003	0.088	0.4 4.3
		Se-S	As-S	
Mean		001.9	021.5	
SD		000.6	000.6	
RSD		33.68	02.60	
		Se-S	As-S	
SN= 000035				16 A
Conc	1	009.5	046.0	
Mean		009.5	046.0	
P/H		0.059	0.186	
Conc	2	007.7	040.8	86% 100%
Mean		008.6	043.4	
P/H		0.038	0.168	
		Se-S	As-S	
Mean		008.6	043.4	
		001.3	003.7	
RSD		14.76	08.45	

ORIGINAL
Prod

HO2-07.302
2/26/92
T.N

71.9
68.1
76 70.0AV +20 87.5% MCJE 16A.
3.83CV
49.8 15:35
49.7
77 49.7AV CCV 9 49.7/50.0 = 99.4%
0.10CV
-1.4 15:40
-0.9
78 -1.1AV CCB 1.0u
-25.50CV

mg/kg values (not dry-wt. corrected)

20X
003(2x)
79 0.022+0 MCJE 12 corr = 0.999
80 0.036+5 MCJE 12 Slope = 0.00278
81 0.049+10 MCJE 12 Inter = 0.0219
82 0.064+15 MCJE 12 x' = (7.87)(20)(.2) = 3.15 mg/kg → 31.5

20X
004(2x)
83 0.01[illegible] MCJE 13 corr = 0.999
84 0.032+5 MCJE 13 Slope = 0.0031
85 0.046+10 MCJE 13 Inter = 0.0155
86 0.062+15 MCJE 13 x' = (5)(20)(.2) = 2.0 mg/kg → 20.

40X
005(2x)
87 0.018+0 MCJE 14 corr = 0.998
88 0.028+5 MCJE 14 Slope = 0.00272
89 0.044+10 MCJE 14 Inter = 0.0156
90 0.056+15 MCJE 14 x' = (5.73)(40)(.2) = 2.29 mg/kg → 45.8

200X
006(2x)
91 0.020+0 MCJE 15 corr = 0.998
92 0.036+5 MCJE 15 Slope = 0.00286
93 0.050+10 MCJE 15 Inter = 0.0208
94 0.063+15 MCJE 15 x' = (7.27)(200)(.2) = 2.90 mg/kg → 290.

20X
008(2x)
95 0.012+0 MCJE 17 corr = 0.999
96 0.027+5 MCJE 17 Slope = 0.00308
97 0.043+10 MCJE 17 Inter = 0.0119
98 0.058+15 MCJE 17 x' = (3.86)(20)(.2) = .154 mg/kg → 15.4

17:25
99 50.8 CCV 10 50.8/50.0 = 101.6%
100 -1.1 CCB 17:30
1.0u

PE560 Triangle Daily Log Run For (Pb) by Furnace

2/26/92

BLK 8:00	1 CCV 9:15	33 +20	65 014 (200x)	17:35 CCV
	2 CCB 9:20			17:30 CCB
3.0	3 H92-01.302	34 016	66 +20	
50.0	3 002	35 +20	67 015 (10x)	
100.0 8:20	4 +20	36 CCV 12:10	68 +20	
ICV (2x)	5 003	37 CCB 12:15	69 016 (10x)	
ICB 8:25	6 +20	38 017	70 +20	
CCV 8:30	7 004	39 +20	71 CCV 15:05	
CCB 8:35	8 +20	40 002 (50x)	72 CCB 15:10	
CRA	9 005	41 +20	73 002 (50x)	
PBS	10 +20	42 003 (10x)	74 +20	
PBSA	11 006	43 +20	75 007 (200x)	
LCSS (20x)	12 +20	44 004 (10x)	76 +20	
LCSSA	13 CCV 10:15	45 +20	77 CCV 15:35	
CCV 9:05	14 CCB 10:20	46 005 (20x)	78 CCB 15:40	
CCB 9:10	15 007	47 +20 13:05	MUSE 003 (10x)(2x) = 20X	dilution factor for MSA analyses
	16 +20	48 CCV 13:10	+5	
	17 008	49 CCB 13:15	+10	
	18 +20	50 006 (100x)	+15	
	19 009	51 +20	MUSE 004 (10x)(2x) = 20X	
	20 +20	52 (007 (100x)	+5	
	21 010 (Dup)	53 +20	+10	
	22 +20	54 008 (10x)	+15	
	23 011 (Spk)	55 +20	MUSE 005 (2x)(20x) = 40x	
	24 CCV 11:10	56 009 (10x)	+5	
	25 CCB 11:15	57 +20	+10	
	26 012	58 010 (10x Dup)	+15	
	27 +20	59 +20	MUSE 006 (2x)(100x) = 200x	
	28 013	60 CCV 14:10	TN 2/26/92 ~~+10~~ +5	
	29 +20	61 CCB 14:15	TN ~~+20~~ 10	
	30 014	62 011 (Spk 10x)	TN 2/26/92 ~~+20~~ 15	
	31 +20	63 013 (100x)	MUSE 008 (10x)(2x) = 20x	
	32 015	64 +20 G. Jim	+5	
			+10	
			+15	

REVIEWED BY:

000?70

Pb. P.E. 560

H92-01.302

2/26/92

T.N

14:15

-1.6
-1.4
61 -1.5AV CCB 1.0 u
-11.85CV
8.6
9.6
62 9.1AV 011 (10x spk) 110% mCJE18 (spk)
8.21CV
8.2
8.2
63 8.2AV 013 (100x) (8.2)(100)(.2) = 164mg/kg mCJE20
0.75CV
29.2
29.5
64 29.3AV +20 105.5% mCJE20A
0.60CV
6.5
6.8
65 6.7AV 014 (200x) (6.7)(200)(.2) = 268mg/kg mCJE21
2.77CV
27.3
26.8
66 27.0AV +20 101.5% mCJE21A
1.48CV
8.6
8.1
67 8.3AV 015 (10x) (8.3)(10)(.2) = 16.6mg/kg mCJE22 W
4.34CV
31.6
31.4
(116%) W NO MSA performed mCJE22A
31.5AV +20
0.44CV
7.5
8.2
69 7.8AV 016 (10x) (7.8)(10)(.2) = 15.6mg/kg mCJE23
6.24CV
31.3
29.8
70 30.5AV +20 113.5% mCJE23A
3.58CV
52.3 15:05
49.9
71 51.1AV CCV 9 51.1/50.0 = 102.2%
3.33CV
-1.3 15:10
-1.4
72 -1.3AV CCB 1.0 u
-0.83CV
5.6
5.9
73 5.8AV 002 (50x) (5.8)(50)(.2) = 58mg/kg mCJE11
4.19CV
28.8
28.8
74 28.8AV +20 115% mCJE11A
0.10CV
52.3
52.7
75 52.5AV 007 (200x) (52.5)(200)(.2) = 2100mg/kg mCJE16
0.46CV

APPENDIX B

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: CHY02

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477446

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077446B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	24	B
67-64-1	Acetone	14	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	1	J

ORIG
Re

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY02

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477446

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077446B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY02

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477446

Sample wt/vol: 1000 (g/mL) ML Lab File ID: G2J77446C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/03/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/06/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY02

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477446

Sample wt/vol: 1000 (g/mL) ML Lab File ID: G2J77446C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/03/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/06/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1F

EPA SAMPLE NO.

CHY02

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477446

Sample wt/vol: 1000 (g/mL) ML Lab File ID: G2J77446C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/03/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/06/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	12.19	5	J
2.	LABORATORY ARTIFACT	12.27	11	BJ
3.	UNKNOWN HYDROCARBON	13.20	2	J
4.	UNKNOWN HYDROCARBON	13.70	3	J
5.	UNKNOWN HYDROCARBON	14.17	3	J
6.	UNKNOWN	14.65	3	J
7.	UNKNOWN	16.09	10	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY02

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477446

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY03

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477451

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077451B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	37	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY03

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477451

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077451B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1	ETHANE, 1,1,2-TRICHLORO-1,2,	4.82	10	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY03

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477451

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077451B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY03

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477451

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077451B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY03

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477451

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077451B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY03

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477451

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY04

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477457

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077457B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	57	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY04

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477457

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077457B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76-13-1	ETHANE, 1,1,2-TRICHLORO-1,2,	4.82	10	JN

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY04

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077457B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY04

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077457B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY04

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477457

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077457B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) N pH: ____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY04

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477457

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.0029	J
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY05

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477458

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077458B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	16	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY05

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477458

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077458B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY05

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477458

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077458B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY05

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477458

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077458B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY05

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477458

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077458B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	9.65	3	J

ORIGINAL
(Red)

PESTICIDE ORGANICS ANALYSIS DATA SHEET

1D

EPA SAMPLE NO.

CHY05

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477458

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	
319-84-6	alpha-BHC		0.050
319-85-7	beta-BHC		0.050
319-86-8	delta-BHC		0.050
58-89-9	gamma-BHC (Lindane)		0.05(
76-44-8	Heptachlor		0.0[illegible]
309-00-2	Aldrin		[illegible]
1024-57-3	Heptachlor epoxide		[illegible]
959-98-8	Endosulfan I		0.
60-57-1	Dieldrin		
72-55-9	4,4'-DDE		
72-20-8	Endrin		
33213-65-9	Endosulfan II		
72-54-8	4,4'-DDD		
1031-07-8	Endosulfan sulfate		
50-29-3	4,4'-DDT		
72-43-5	Methoxychlor		
53494-70-5	Endrin ketone		
7421-93-4	Endrin aldehyde		
5103-71-9	alpha-Chlordane		
5103-74-2	gamma-Chlordane		
8001-35-2	Toxaphene		
12674-11-2	Aroclor-1016		
11104-28-2	Aroclor-1221		
11141-16-5	Aroclor-1232		
53469-21-9	Aroclor-1242		
12672-29-6	Aroclor-1248		
11097-69-1	Aroclor-1254		
11096-82-5	Aroclor-1260		

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY06

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477459

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077459B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	32	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY06

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477459

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077459B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	LABORATORY ARTIFACT	21.30	13	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY06

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477459

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077459B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY06

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477459

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077459B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	2	J
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY06

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477459

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077459B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.77	4	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY06

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477459

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.0071	JP
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY07

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477460

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077460B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	54	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY07

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477460

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077460B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY07

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477460

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077460B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/03/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY07

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477460

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077460B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/03/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	1	J
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY07

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477460

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077460B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/03/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY07

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477460

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY08

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477464

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077464B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	22	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY08

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477464

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077464B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/02/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY08

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477464

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077464B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY08

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477464

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077464B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY08

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477464

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077464B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

ORIGINAL

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY08

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477464

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.0046	JP
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.014	JP
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY09

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477465

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R77465B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	73	B
67-64-1	Acetone	34	
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

ORIGINAL
(Red)

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY09

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477465

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C2R77465B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/06/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY09

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477465

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077465B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

ORIGINAL

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY09

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477465

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077465B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY09

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477465

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077465B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		TETRACHLOROETHANE	4.63	3	J
2.		UNKNOWN	4.77	4	J
3.	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	4.28	47	J

ORIGINAL
(Red)

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY09

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477465

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.0050	JP
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

17744 CHY 02

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY10

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477466

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077466B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. Date Analyzed: 02/03/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	7	BJ
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY10

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477466

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN077466B51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/03/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY10

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477466

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077466B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY10

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477466

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077466B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY10

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477466

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077466B52

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/01/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 2 CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	4.73	6	J
2.	UNKNOWN	4.75	11	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY10

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477466

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.0049	JP
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY11

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477472

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR077472B54

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 29 Date Analyzed: 02/03/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	50	B
67-64-1	Acetone	54	B
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	Trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (total)	14	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY11

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477472

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GDJ77472A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 29 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	920	U
111-44-4	bis(2-Chloroethyl)Ether	920	U
95-57-8	2-Chlorophenol	920	U
541-73-1	1,3-Dichlorobenzene	920	U
106-46-7	1,4-Dichlorobenzene	920	U
95-50-1	1,2-Dichlorobenzene	920	U
95-48-7	2-Methylphenol	920	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	920	U
106-44-5	4-Methylphenol	920	U
621-64-7	N-Nitroso-Di-n-Propylamine	920	U
67-72-1	Hexachloroethane	920	U
98-95-3	Nitrobenzene	920	U
78-59-1	Isophorone	920	U
88-75-5	2-Nitrophenol	920	U
105-67-9	2,4-Dimethylphenol	920	U
111-91-1	bis(2-Chloroethoxy)Methane	920	U
120-83-2	2,4-Dichlorophenol	920	U
120-82-1	1,2,4-Trichlorobenzene	920	U
91-20-3	Naphthalene	920	U
106-47-8	4-Chloroaniline	920	U
87-68-3	Hexachlorobutadiene	920	U
59-50-7	4-Chloro-3-Methylphenol	920	U
91-57-6	2-Methylnaphthalene	920	U
77-47-4	Hexachlorocyclopentadiene	920	U
88-06-2	2,4,6-Trichlorophenol	920	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	920	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl Phthalate	920	U
208-96-8	Acenaphthylene	100	J
606-20-2	2,6-Dinitrotoluene	920	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	180	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY11

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477472

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GDJ77472A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 29 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

PC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	920	U
84-66-2	Diethylphthalate	180	J
7005-72-3	4-Chlorophenyl-phenylether	920	U
86-73-7	Fluorene	270	J
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-Methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	920	U
101-55-3	4-Bromophenyl-phenylether	920	U
118-74-1	Hexachlorobenzene	920	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	2400	
120-12-7	Anthracene	550	J
86-74-8	Carbazole	250	J
84-74-2	Di-n-Butylphthalate	920	U
206-44-0	Fluoranthene	5600	
129-00-0	Pyrene	2900	
85-68-7	Butylbenzylphthalate	920	U
91-94-1	3,3'-Dichlorobenzidine	920	U
56-55-3	Benzo(a)Anthracene	2300	
218-01-9	Chrysene	1800	
117-81-7	bis(2-Ethylhexyl)Phthalate	280	J
117-84-0	Di-n-Octyl Phthalate	920	U
205-99-2	Benzo(b)Fluoranthene	3800	X
207-08-9	Benzo(k)Fluoranthene	3800	X
50-32-8	Benzo(a)Pyrene	1800	
193-39-5	Indeno(1,2,3-cd)Pyrene	1200	
53-70-3	Dibenz(a,h)Anthracene	410	J
191-24-2	Benzo(g,h,i)Perylene	1200	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY11

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477472

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GDJ77472A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 29 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 24

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.38	1100	J
2.		UNKNOWN	4.60	1300	J
3.		ALDOL	4.75	2100	ABJ
4.		UNKNOWN	5.20	1700	J
5.		UNKNOWN	5.83	1600	J
6.		BLANK CONTAMINANT	9.12	370	BJ
7.		BLANK CONTAMINANT	11.19	1100	BJ
8.		UNKNOWN SILOXANE	12.04	1100	J
9.		UNKNOWN CARBOXYLIC ACID	12.32	550	J
10.		UNKNOWN PAH	12.35	650	J
11.		UNKNOWN SILOXANE	12.82	1100	J
12.		UNKNOWN PAH	13.97	1300	J
13.		UNKNOWN PAH	14.07	650	J
14.		UNKNOWN PAH	14.12	1000	J
15.		UNKNOWN SILOXANE	14.19	2100	J
16.		LABORATORY ARTIFACT	14.52	1100	BJ
17.		UNKNOWN SILOXANE	14.80	2100	J
18.		UNKNOWN	15.05	740	J
19.		UNKNOWN SILOXANE	15.42	1600	J
20.		UNKNOWN PAH	15.75	920	J
21.		UNKNOWN	15.97	1300	J
22.		UNKNOWN SILOXANE	16.02	1300	J
23.		UNKNOWN	17.05	2100	J
24.		BENZOFLUORANTHENE	17.19	2300	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY11

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477472

Sample wt/vol: 30.40 (g/ml) G Lab File ID:

% Moisture: 29 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.4	
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	34	PE
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	4.4	P
1024-57-3	Heptachlor epoxide	0.95	JP
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	4.6	U
72-20-8	Endrin	3.2	JP
33213-65-9	Endosulfan II	4.6	U
72-54-8	4,4'-DDD	2.8	JP
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	4.6	U
72-43-5	Methoxychlor	7.8	JPB
53494-70-5	Endrin ketone	3.8	JP
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	5.3	P
5103-74-2	gamma-Chlordane	1.0	JP
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY11DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477472 D20

Sample wt/vol: 30.40 (g/ml) G Lab File ID:

% Moisture: 29 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/13/92

Injection Volume: 2.0 (uL) Dilution Factor: 2

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.7	U
319-85-7	beta-BHC	4.7	U
319-86-8	delta-BHC	1.5	JPD
58-89-9	gamma-BHC (Lindane)	31	PD
76-44-8	Heptachlor	4.7	U
309-00-2	Aldrin	3.7	JPD
1024-57-3	Heptachlor epoxide	1.7	JPD
959-98-8	Endosulfan I	4.7	U
60-57-1	Dieldrin	9.2	U
72-55-9	4,4'-DDE	9.2	U
72-20-8	Endrin	3.9	JPD
33213-65-9	Endosulfan II	9.2	U
72-54-8	4,4'-DDD	1.8	JPD
1031-07-8	Endosulfan sulfate	9.2	U
50-29-3	4,4'-DDT	9.2	U
72-43-5	Methoxychlor	47	U
53494-70-5	Endrin ketone	9.2	U
7421-93-4	Endrin aldehyde	9.2	U
5103-71-9	alpha-Chlordane	4.4	JPD
5103-74-2	gamma-Chlordane	2.7	JD
8001-35-2	Toxaphene	470	U
12674-11-2	Aroclor-1016	92	U
11104-28-2	Aroclor-1221	190	U
11141-16-5	Aroclor-1232	92	U
53469-21-9	Aroclor-1242	92	U
12672-29-6	Aroclor-1248	92	U
11097-69-1	Aroclor-1254	92	U
11096-82-5	Aroclor-1260	92	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477476

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077476C18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 55 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	22	U
74-83-9	Bromomethane	22	U
75-01-4	Vinyl Chloride	22	U
75-00-3	Chloroethane	22	U
75-09-2	Methylene Chloride	88	B
67-64-1	Acetone	96	B
75-15-0	Carbon Disulfide	22	U
75-35-4	1,1-Dichloroethene	22	U
75-34-3	1,1-Dichloroethane	22	U
540-59-0	1,2-Dichloroethene (total)	22	U
67-66-3	Chloroform	22	U
107-06-2	1,2-Dichloroethane	22	U
78-93-3	2-Butanone	22	U
71-55-6	1,1,1-Trichloroethane	22	U
56-23-5	Carbon Tetrachloride	22	U
75-27-4	Bromodichloromethane	22	U
78-87-5	1,2-Dichloropropane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
79-01-6	Trichloroethene	22	U
124-48-1	Dibromochloromethane	22	U
79-00-5	1,1,2-Trichloroethane	22	U
71-43-2	Benzene	22	U
10061-02-6	Trans-1,3-Dichloropropene	22	U
75-25-2	Bromoform	22	U
108-10-1	4-Methyl-2-Pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
108-88-3	Toluene	22	U
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	22	U
100-42-5	Styrene	22	U
1330-20-7	Xylene (total)	22	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477476

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GR077476C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 55 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	75	J
111-44-4	bis(2-Chloroethyl)Ether	720	U
95-57-8	2-Chlorophenol	720	U
541-73-1	1,3-Dichlorobenzene	720	U
106-46-7	1,4-Dichlorobenzene	720	U
95-50-1	1,2-Dichlorobenzene	720	U
95-48-7	2-Methylphenol	720	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	720	U
106-44-5	4-Methylphenol	95	J
621-64-7	N-Nitroso-Di-n-Propylamine	720	U
67-72-1	Hexachloroethane	720	U
98-95-3	Nitrobenzene	720	U
78-59-1	Isophorone	720	U
88-75-5	2-Nitrophenol	720	U
105-67-9	2,4-Dimethylphenol	720	U
111-91-1	bis(2-Chloroethoxy)Methane	720	U
120-83-2	2,4-Dichlorophenol	720	U
120-82-1	1,2,4-Trichlorobenzene	720	U
91-20-3	Naphthalene	720	U
106-47-8	4-Chloroaniline	720	U
87-68-3	Hexachlorobutadiene	720	U
59-50-7	4-Chloro-3-Methylphenol	720	U
91-57-6	2-Methylnaphthalene	720	U
77-47-4	Hexachlorocyclopentadiene	720	U
88-06-2	2,4,6-Trichlorophenol	720	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	720	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	720	U
208-96-8	Acenaphthylene	720	U
606-20-2	2,6-Dinitrotoluene	720	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	720	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477476

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GR077476C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 55 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	720	U
121-14-2	2,4-Dinitrotoluene	720	U
84-66-2	Diethylphthalate	720	U
7005-72-3	4-Chlorophenyl-phenylether	720	U
86-73-7	Fluorene	720	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	720	U
101-55-3	4-Bromophenyl-phenylether	720	U
118-74-1	Hexachlorobenzene	720	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	720	U
86-74-8	Carbazole	720	U
84-74-2	Di-n-Butylphthalate	79	J
206-44-0	Fluoranthene	360	J
129-00-0	Pyrene	320	J
85-68-7	Butylbenzylphthalate	76	J
91-94-1	3,3'-Dichlorobenzidine	720	U
56-55-3	Benzo(a)Anthracene	210	J
218-01-9	Chrysene	210	J
117-81-7	bis(2-Ethylhexyl)Phthalate	350	J
117-84-0	Di-n-Octyl Phthalate	720	U
205-99-2	Benzo(b)Fluoranthene	440	JX
207-08-9	Benzo(k)Fluoranthene	440	JX
50-32-8	Benzo(a)Pyrene	180	J
193-39-5	Indeno(1,2,3-cd)Pyrene	88	J
53-70-3	Dibenz(a,h)Anthracene	720	U
191-24-2	Benzo(g,h,i)Perylene	87	J

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477476

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GR077476C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 55 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.52	1300	J
2.		UNKNOWN	4.73	1200	J
3.		ALDOL	4.87	1100	ABJ
4.		ALDOL	5.00	1200	AJ
5.		UNKNOWN	5.32	870	J
6.		UNKNOWN	5.53	440	J
7.		UNKNOWN	5.97	1500	J
8.		UNKNOWN	7.60	510	J
9.		UNKNOWN	8.28	290	J
10.	70-55-3	BENZENESULFONAMIDE, 4-METHYL	10.80	360	JN
11.		UNKNOWN	12.35	360	J
12.		UNKNOWN	12.39	510	J
13.	57-10-3	HEXADECANOIC ACID	12.44	730	JN
14.		UNKNOWN	13.44	220	J
15.		UNKNOWN HYDROCARBON	14.22	290	J
16.		UNKNOWN HYDROCARBON	15.17	510	J
17.		UNKNOWN	15.64	220	J
18.		UNKNOWN	16.10	730	J
19.		UNKNOWN	16.55	730	J
20.		UNKNOWN	16.85	660	J
21.		UNKNOWN	17.22	3000	J
22.		UNKNOWN	18.85	2200	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY12

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477476

Sample wt/vol: 30.30 (g/ml) G Lab File ID:

% Moisture: 55 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0.38	JP
319-85-7	beta-BHC	3.7	U
319-86-8	delta-BHC	3.7	U
58-89-9	gamma-BHC (Lindane)	3.7	U
76-44-8	Heptachlor	0.13	JPB
309-00-2	Aldrin	1.1	JP
1024-57-3	Heptachlor epoxide	3.7	U
959-98-8	Endosulfan I	3.7	U
60-57-1	Dieldrin	7.3	U
72-55-9	4,4'-DDE	4.4	JP
72-20-8	Endrin	7.6	
33213-65-9	Endosulfan II	2.5	JP
72-54-8	4,4'-DDD	4.8	J
1031-07-8	Endosulfan sulfate	4.7	JP
50-29-3	4,4'-DDT	3.2	JP
72-43-5	Methoxychlor	15	JPB
53494-70-5	Endrin ketone	7.3	U
7421-93-4	Endrin aldehyde	2.6	JP
5103-71-9	alpha-Chlordane	4.1	P
5103-74-2	gamma-Chlordane	3.5	JP
8001-35-2	Toxaphene	370	U
12674-11-2	Aroclor-1016	73	U
11104-28-2	Aroclor-1221	150	U
11141-16-5	Aroclor-1232	73	U
53469-21-9	Aroclor-1242	73	U
12672-29-6	Aroclor-1248	73	U
11097-69-1	Aroclor-1254	73	U
11096-82-5	Aroclor-1260	73	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY13

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477483

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077483A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 36 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	16	U
74-83-9	Bromomethane	16	U
75-01-4	Vinyl Chloride	16	U
75-00-3	Chloroethane	16	U
75-09-2	Methylene Chloride	67	B
67-64-1	Acetone	54	B
75-15-0	Carbon Disulfide	16	U
75-35-4	1,1-Dichloroethene	16	U
75-34-3	1,1-Dichloroethane	16	U
540-59-0	1,2-Dichloroethene (total)	16	U
67-66-3	Chloroform	16	U
107-06-2	1,2-Dichloroethane	16	U
78-93-3	2-Butanone	16	U
71-55-6	1,1,1-Trichloroethane	16	U
56-23-5	Carbon Tetrachloride	16	U
75-27-4	Bromodichloromethane	16	U
78-87-5	1,2-Dichloropropane	16	U
10061-01-5	cis-1,3-Dichloropropene	16	U
79-01-6	Trichloroethene	16	U
124-48-1	Dibromochloromethane	16	U
79-00-5	1,1,2-Trichloroethane	16	U
71-43-2	Benzene	16	U
10061-02-6	Trans-1,3-Dichloropropene	16	U
75-25-2	Bromoform	16	U
108-10-1	4-Methyl-2-Pentanone	16	U
591-78-6	2-Hexanone	16	U
127-18-4	Tetrachloroethene	16	U
79-34-5	1,1,2,2-Tetrachloroethane	16	U
108-88-3	Toluene	16	U
108-90-7	Chlorobenzene	16	U
100-41-4	Ethylbenzene	16	U
100-42-5	Styrene	16	U
1330-20-7	Xylene (total)	16	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY13

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477483

Sample wt/vol: 30.3 (g/mL) G Lab File ID: G2J77483A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 36 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	510	U
111-44-4	bis(2-Chloroethyl)Ether	510	U
95-57-8	2-Chlorophenol	510	U
541-73-1	1,3-Dichlorobenzene	510	U
106-46-7	1,4-Dichlorobenzene	510	U
95-50-1	1,2-Dichlorobenzene	510	U
95-48-7	2-Methylphenol	510	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	510	U
106-44-5	4-Methylphenol	510	U
621-64-7	N-Nitroso-Di-n-Propylamine	510	U
67-72-1	Hexachloroethane	510	U
98-95-3	Nitrobenzene	510	U
78-59-1	Isophorone	510	U
88-75-5	2-Nitrophenol	510	U
105-67-9	2,4-Dimethylphenol	510	U
111-91-1	bis(2-Chloroethoxy)Methane	510	U
120-83-2	2,4-Dichlorophenol	510	U
120-82-1	1,2,4-Trichlorobenzene	510	U
91-20-3	Naphthalene	510	U
106-47-8	4-Chloroaniline	510	U
87-68-3	Hexachlorobutadiene	510	U
59-50-7	4-Chloro-3-Methylphenol	510	U
91-57-6	2-Methylnaphthalene	510	U
77-47-4	Hexachlorocyclopentadiene	510	U
88-06-2	2,4,6-Trichlorophenol	510	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	510	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethyl Phthalate	510	U
208-96-8	Acenaphthylene	510	U
606-20-2	2,6-Dinitrotoluene	510	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	510	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY13

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477483

Sample wt/vol: 30.3 (g/mL) G Lab File ID: G2J77483A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 36 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	510	U
121-14-2	2,4-Dinitrotoluene	510	U
84-66-2	Diethylphthalate	76	J
7005-72-3	4-Chlorophenyl-phenylether	510	U
86-73-7	Fluorene	510	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	510	U
101-55-3	4-Bromophenyl-phenylether	510	U
118-74-1	Hexachlorobenzene	510	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	72	J
120-12-7	Anthracene	510	U
86-74-8	Carbazole	510	U
84-74-2	Di-n-Butylphthalate	510	U
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	130	J
85-68-7	Butylbenzylphthalate	510	U
91-94-1	3,3'-Dichlorobenzidine	510	U
56-55-3	Benzo(a)Anthracene	100	J
218-01-9	Chrysene	100	J
117-81-7	bis(2-Ethylhexyl)Phthalate	53	J
117-84-0	Di-n-Octyl Phthalate	510	U
205-99-2	Benzo(b)Fluoranthene	180	JX
207-08-9	Benzo(k)Fluoranthene	180	JX
50-32-8	Benzo(a)Pyrene	110	J
193-39-5	Indeno(1,2,3-cd)Pyrene	86	J
53-70-3	Dibenz(a,h)Anthracene	510	U
191-24-2	Benzo(g,h,i)Perylene	91	J

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY13

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477483

Sample wt/vol: 30.3 (g/mL) G Lab File ID: G2J77483A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 36 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.5

Number TICs found: 27

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.40	310	J
2.		UNKNOWN	4.62	1500	J
3.		ALDOL	4.77	1400	ABJ
4.		ALDOL	4.88	210	AJ
5.		UNKNOWN	5.87	1900	J
6.		BLANK CONTAMINANT	9.12	210	BJ
7.		UNKNOWN CARBOXYLIC ACID	9.84	210	J
8.		BLANK CONTAMINANT	10.24	360	BJ
9.		BLANK CONTAMINANT	11.20	570	BJ
10.		UNKNOWN SILOXANE	12.05	570	J
11.		UNKNOWN	12.59	150	J
12.		UNKNOWN SILOXANE	12.84	520	J
13.		BLANK CONTAMINANT	13.54	1000	BJ
14.		UNKNOWN SILOXANE	14.20	670	J
15.		LABORATORY ARTIFACT	14.54	210	BJ
16.		UNKNOWN SILOXANE	14.82	620	J
17.		UNKNOWN	15.07	310	J
18.		UNKNOWN SILOXANE	15.44	520	J
19.		UNKNOWN SILOXANE	16.04	820	J
20.		UNKNOWN	16.42	460	J
21.		UNKNOWN	16.47	260	J
22.		UNKNOWN	16.57	210	J
23.		UNKNOWN	16.72	930	J
24.		UNKNOWN	17.07	520	J
25.		UNKNOWN	17.15	770	J
26.		UNKNOWN	23.39	570	J
27.		UNKNOWN	23.45	310	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY13

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477483

Sample wt/vol: 30.20 (g/ml) G Lab File ID:

% Moisture: 36 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.5 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.6	U
319-85-7	beta-BHC	2.6	U
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
76-44-8	Heptachlor	0.14	JPB
309-00-2	Aldrin	0.33	J
1024-57-3	Heptachlor epoxide	0.24	JP
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	0.46	JP
72-55-9	4,4'-DDE	5.1	U
72-20-8	Endrin	1.6	JP
33213-65-9	Endosulfan II	0.32	JP
72-54-8	4,4'-DDD	5.1	U
1031-07-8	Endosulfan sulfate	5.1	U
50-29-3	4,4'-DDT	5.1	U
72-43-5	Methoxychlor	2.7	JPB
53494-70-5	Endrin ketone	0.65	JP
7421-93-4	Endrin aldehyde	5.1	U
5103-71-9	alpha-Chlordane	0.26	JP
5103-74-2	gamma-Chlordane	0.13	J
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	51	U
11096-82-5	Aroclor-1260	51	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY14

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477484

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR077484A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 56 Date Analyzed: 02/05/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	23	U
74-83-9	Bromomethane	23	U
75-01-4	Vinyl Chloride	23	U
75-00-3	Chloroethane	23	U
75-09-2	Methylene Chloride	54	B
67-64-1	Acetone	39	B
75-15-0	Carbon Disulfide	23	U
75-35-4	1,1-Dichloroethene	23	U
75-34-3	1,1-Dichloroethane	23	U
540-59-0	1,2-Dichloroethene (total)	23	U
67-66-3	Chloroform	23	U
107-06-2	1,2-Dichloroethane	23	U
78-93-3	2-Butanone	23	U
71-55-6	1,1,1-Trichloroethane	23	U
56-23-5	Carbon Tetrachloride	23	U
75-27-4	Bromodichloromethane	23	U
78-87-5	1,2-Dichloropropane	23	U
10061-01-5	cis-1,3-Dichloropropene	23	U
79-01-6	Trichloroethene	23	U
124-48-1	Dibromochloromethane	23	U
79-00-5	1,1,2-Trichloroethane	23	U
71-43-2	Benzene	23	U
10061-02-6	Trans-1,3-Dichloropropene	23	U
75-25-2	Bromoform	23	U
108-10-1	4-Methyl-2-Pentanone	23	U
591-78-6	2-Hexanone	23	U
127-18-4	Tetrachloroethene	23	U
79-34-5	1,1,2,2-Tetrachloroethane	23	U
108-88-3	Toluene	23	U
108-90-7	Chlorobenzene	23	U
100-41-4	Ethylbenzene	23	U
100-42-5	Styrene	23	U
1330-20-7	Xylene (total)	23	U

ORIGINAL
Pedi

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY14

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477484

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077484C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 56 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	740	U
111-44-4	bis(2-Chloroethyl)Ether	740	U
95-57-8	2-Chlorophenol	740	U
541-73-1	1,3-Dichlorobenzene	740	U
106-46-7	1,4-Dichlorobenzene	740	U
95-50-1	1,2-Dichlorobenzene	740	U
95-48-7	2-Methylphenol	740	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	740	U
106-44-5	4-Methylphenol	740	U
621-64-7	N-Nitroso-Di-n-Propylamine	740	U
67-72-1	Hexachloroethane	740	U
98-95-3	Nitrobenzene	740	U
78-59-1	Isophorone	740	U
88-75-5	2-Nitrophenol	740	U
105-67-9	2,4-Dimethylphenol	740	U
111-91-1	bis(2-Chloroethoxy)Methane	740	U
120-83-2	2,4-Dichlorophenol	740	U
120-82-1	1,2,4-Trichlorobenzene	740	U
91-20-3	Naphthalene	740	U
106-47-8	4-Chloroaniline	740	U
87-68-3	Hexachlorobutadiene	740	U
59-50-7	4-Chloro-3-Methylphenol	740	U
91-57-6	2-Methylnaphthalene	740	U
77-47-4	Hexachlorocyclopentadiene	740	U
88-06-2	2,4,6-Trichlorophenol	740	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	740	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	740	U
208-96-8	Acenaphthylene	740	U
606-20-2	2,6-Dinitrotoluene	740	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	740	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY14

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477484

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077484C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 56 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	740	U
121-14-2	2,4-Dinitrotoluene	740	U
84-66-2	Diethylphthalate	740	U
7005-72-3	4-Chlorophenyl-phenylether	740	U
86-73-7	Fluorene	740	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	740	U
101-55-3	4-Bromophenyl-phenylether	740	U
118-74-1	Hexachlorobenzene	740	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	77	J
86-74-8	Carbazole	740	U
84-74-2	Di-n-Butylphthalate	740	U
206-44-0	Fluoranthene	790	
129-00-0	Pyrene	450	J
85-68-7	Butylbenzylphthalate	130	J
91-94-1	3,3'-Dichlorobenzidine	740	U
56-55-3	Benzo(a)Anthracene	420	J
218-01-9	Chrysene	340	J
117-81-7	bis(2-Ethylhexyl)Phthalate	350	J
117-84-0	Di-n-Octyl Phthalate	740	U
205-99-2	Benzo(b)Fluoranthene	610	JX
207-08-9	Benzo(k)Fluoranthene	610	JX
50-32-8	Benzo(a)Pyrene	360	J
193-39-5	Indeno(1,2,3-cd)Pyrene	220	J
53-70-3	Dibenz(a,h)Anthracene	78	J
191-24-2	Benzo(g,h,i)Perylene	190	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY14

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477484

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077484C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 56 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 26 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.50	370	J
2.		TETRACHLOROETHANE	4.62	220	J
3.		UNKNOWN	4.72	1400	J
4.		ALDOL	4.85	1100	ABJ
5.		ALDOL	4.97	670	AJ
6.	100-52-7	BENZALDEHYDE	5.07	150	JN
7.		ALDOL	5.47	150	AJ
8.		UNKNOWN	5.95	2500	J
9.		UNKNOWN	7.10	300	J
10.		UNKNOWN	7.38	370	J
11.		BLANK CONTAMINANT	7.93	220	BJ
12.		BLANK CONTAMINANT	9.20	300	BJ
13.		UNKNOWN	12.32	220	J
14.		UNKNOWN CARBOXYLIC ACID	12.40	450	J
15.		UNKNOWN	13.42	220	J
16.		LABORATORY ARTIFACT	14.64	150	BJ
17.		UNKNOWN HYDROCARBON	15.15	1600	J
18.		UNKNOWN HYDROCARBON	16.09	2500	J
19.		UNKNOWN	16.54	670	J
20.		UNKNOWN	16.59	820	J
21.		UNKNOWN	16.84	1400	J
22.		UNKNOWN	17.24	13000	J
23.		BENZOFLUORANTHENE	17.37	600	J
24.		UNKNOWN	18.32	1700	J
25.		UNKNOWN	18.90	6800	J
26.		UNKNOWN	21.54	3400	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY14

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HO SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477484

Sample wt/vol: 30.10 (g/ml) G Lab File ID:

% Moisture: 56 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0.36	JP
319-85-7	beta-BHC	3.9	U
319-86-8	delta-BHC	3.9	U
58-89-9	gamma-BHC (Lindane)	40	E
76-44-8	Heptachlor	3.9	U
309-00-2	Aldrin	4.3	P
1024-57-3	Heptachlor epoxide	5.6	P
959-98-8	Endosulfan I	3.9	U
60-57-1	Dieldrin	7.6	U
72-55-9	4,4'-DDE	7.6	U
72-20-8	Endrin	4.4	JP
33213-65-9	Endosulfan II	7.6	U
72-54-8	4,4'-DDD	4.3	JP
1031-07-8	Endosulfan sulfate	0.69	JP
50-29-3	4,4'-DDT	1.5	JP
72-43-5	Methoxychlor	10.0	JPB
53494-70-5	Endrin ketone	4.6	JP
7421-93-4	Endrin aldehyde	3.1	JP
5103-71-9	alpha-Chlordane	6.2	P
5103-74-2	gamma-Chlordane	3.3	J
8001-35-2	Toxaphene	390	U
12674-11-2	Aroclor-1016	76	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	76	U
53469-21-9	Aroclor-1242	76	U
12672-29-6	Aroclor-1248	76	U
11097-69-1	Aroclor-1254	76	U
11096-82-5	Aroclor-1260	76	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY14DL

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477484 D20

Sample wt/vol: 30.10 (g/ml) G Lab File ID:

% Moisture: 56 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/13/92

Injection Volume: 2.0 (uL) Dilution Factor: 2

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	7.9	U
319-85-7	beta-BHC	7.9	U
319-86-8	delta-BHC	5.5	JPD
58-89-9	gamma-BHC (Lindane)	34	PD
76-44-8	Heptachlor	2.8	JPBD
309-00-2	Aldrin	3.2	JPD
1024-57-3	Heptachlor epoxide	1.9	JPD
959-98-8	Endosulfan I	14	PD
60-57-1	Dieldrin	3.3	JPD
72-55-9	4,4'-DDE	15	U
72-20-8	Endrin	4.5	JPD
33213-65-9	Endosulfan II	15	U
72-54-8	4,4'-DDD	3.8	JPD
1031-07-8	Endosulfan sulfate	15	U
50-29-3	4,4'-DDT	1.8	JPD
72-43-5	Methoxychlor	79	U
53494-70-5	Endrin ketone	15	U
7421-93-4	Endrin aldehyde	2.7	JPD
5103-71-9	alpha-Chlordane	7.9	U
5103-74-2	gamma-Chlordane	1.1	JPD
8001-35-2	Toxaphene	790	U
12674-11-2	Aroclor-1016	150	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	150	U
53469-21-9	Aroclor-1242	150	U
12672-29-6	Aroclor-1248	150	U
11097-69-1	Aroclor-1254	150	U
11096-82-5	Aroclor-1260	150	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY15

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477485

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077485B18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 19 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	49	B
67-64-1	Acetone	61	B
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	Trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CHY15

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477485

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77485A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 25.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	10000	U
111-44-4	bis(2-Chloroethyl)Ether	10000	U
95-57-8	2-Chlorophenol	10000	U
541-73-1	1,3-Dichlorobenzene	10000	U
106-46-7	1,4-Dichlorobenzene	10000	U
95-50-1	1,2-Dichlorobenzene	10000	U
95-48-7	2-Methylphenol	10000	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10000	U
106-44-5	4-Methylphenol	10000	U
621-64-7	N-Nitroso-Di-n-Propylamine	10000	U
67-72-1	Hexachloroethane	10000	U
98-95-3	Nitrobenzene	10000	U
78-59-1	Isophorone	10000	U
88-75-5	2-Nitrophenol	10000	U
105-67-9	2,4-Dimethylphenol	10000	U
111-91-1	bis(2-Chloroethoxy)Methane	10000	U
120-83-2	2,4-Dichlorophenol	10000	U
120-82-1	1,2,4-Trichlorobenzene	2300	J
91-20-3	Naphthalene	10000	U
106-47-8	4-Chloroaniline	10000	U
87-68-3	Hexachlorobutadiene	10000	U
59-50-7	4-Chloro-3-Methylphenol	10000	U
91-57-6	2-Methylnaphthalene	10000	U
77-47-4	Hexachlorocyclopentadiene	10000	U
88-06-2	2,4,6-Trichlorophenol	10000	U
95-95-4	2,4,5-Trichlorophenol	24000	U
91-58-7	2-Chloronaphthalene	10000	U
88-74-4	2-Nitroaniline	24000	U
131-11-3	Dimethyl Phthalate	10000	U
208-96-8	Acenaphthylene	10000	U
606-20-2	2,6-Dinitrotoluene	10000	U
99-09-2	3-Nitroaniline	24000	U
83-32-9	Acenaphthene	10000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY15

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477485

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77485A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 25.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	24000	U
100-02-7	4-Nitrophenol	24000	U
132-64-9	Dibenzofuran	10000	U
121-14-2	2,4-Dinitrotoluene	10000	U
84-66-2	Diethylphthalate	10000	U
7005-72-3	4-Chlorophenyl-phenylether	10000	U
86-73-7	Fluorene	10000	U
100-01-6	4-Nitroaniline	24000	U
534-52-1	4,6-Dinitro-2-Methylphenol	24000	U
86-30-6	N-Nitrosodiphenylamine (1)	10000	U
101-55-3	4-Bromophenyl-phenylether	10000	U
118-74-1	Hexachlorobenzene	10000	U
87-86-5	Pentachlorophenol	24000	U
85-01-8	Phenanthrene	2900	J
120-12-7	Anthracene	10000	U
86-74-8	Carbazole	10000	U
84-74-2	Di-n-Butylphthalate	10000	U
206-44-0	Fluoranthene	7100	J
129-00-0	Pyrene	4900	J
85-68-7	Butylbenzylphthalate	10000	U
91-94-1	3,3'-Dichlorobenzidine	10000	U
56-55-3	Benzo(a)Anthracene	3000	J
218-01-9	Chrysene	3800	J
117-81-7	bis(2-Ethylhexyl)Phthalate	1300	J
117-84-0	Di-n-Octyl Phthalate	10000	U
205-99-2	Benzo(b)Fluoranthene	8000	JX
207-08-9	Benzo(k)Fluoranthene	8000	JX
50-32-8	Benzo(a)Pyrene	3700	J
193-39-5	Indeno(1,2,3-cd)Pyrene	2400	J
53-70-3	Dibenz(a,h)Anthracene	10000	U
191-24-2	Benzo(g,h,i)Perylene	2100	J

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY15

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477485

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77485A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 19 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 25.0

GPC Cleanup: (Y/N) Y pH: 6.7

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	10.87	23000	J
2.		UNKNOWN	11.50	50000	J
3.		UNKNOWN	11.79	22000	J
4.		UNKNOWN	11.95	24000	J
5.		UNKNOWN	11.99	21000	J
6.		UNKNOWN	12.05	22000	J
7.		UNKNOWN	12.39	53000	J
8.		UNKNOWN	12.49	29000	J
9.		PCB	13.20	21000	J
10.		PCB	13.47	23000	J
11.		PCB	13.84	29000	J
12.		PCB	13.97	32000	J
13.		PCB	14.10	85000	J
14.		PCB	14.39	100000	J
15.		PCB	14.52	36000	J
16.		PCB	14.67	69000	J
17.		PCB	14.82	38000	J
18.		PCB	15.09	30000	J
19.		PCB	15.37	70000	J
20.		PCB	15.69	23000	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY15

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477485 R1D21

Sample wt/vol: 30.00 (g/ml) G Lab File ID: PR077485A22

% Moisture: 19 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/20/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/21/92

Injection Volume: 2.0 (uL) Dilution Factor: 20

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	11	JP
319-85-7	beta-BHC	42	U
319-86-8	delta-BHC	42	U
58-89-9	gamma-BHC (Lindane)	3.4	JP
76-44-8	Heptachlor	42	U
309-00-2	Aldrin	12	JP
1024-57-3	Heptachlor epoxide	42	U
959-98-8	Endosulfan I	42	U
60-57-1	Dieldrin	81	U
72-55-9	4,4'-DDE	81	U
72-20-8	Endrin	81	U
33213-65-9	Endosulfan II	81	U
72-54-8	4,4'-DDD	81	U
1031-07-8	Endosulfan sulfate	81	U
50-29-3	4,4'-DDT	81	U
72-43-5	Methoxychlor	420	U
53494-70-5	Endrin ketone	81	U
7421-93-4	Endrin aldehyde	81	U
5103-71-9	alpha-Chlordane	42	U
5103-74-2	gamma-Chlordane	42	U
8001-35-2	Toxaphene	4200	U
12674-11-2	Aroclor-1016	810	U
11104-28-2	Aroclor-1221	1700	U
11141-16-5	Aroclor-1232	810	U
53469-21-9	Aroclor-1242	810	U
12672-29-6	Aroclor-1248	810	U
11097-69-1	Aroclor-1254	810	U
11096-82-5	Aroclor-1260	170000	PCB

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY15DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477485 R1D22

Sample wt/vol: 30.00 (g/ml) G Lab File ID: PR077485A22

% Moisture: 19 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/20/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/22/92

Injection Volume: 2.0 (uL) Dilution Factor: 200

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	420	U
319-85-7	beta-BHC	420	U
319-86-8	delta-BHC	420	U
58-89-9	gamma-BHC (Lindane)	420	U
76-44-8	Heptachlor	420	U
309-00-2	Aldrin	420	U
1024-57-3	Heptachlor epoxide	420	U
959-98-8	Endosulfan I	420	U
60-57-1	Dieldrin	810	U
72-55-9	4,4'-DDE	810	U
72-20-8	Endrin	810	U
33213-65-9	Endosulfan II	810	U
72-54-8	4,4'-DDD	810	U
1031-07-8	Endosulfan sulfate	810	U
50-29-3	4,4'-DDT	810	U
72-43-5	Methoxychlor	4200	U
53494-70-5	Endrin ketone	810	U
7421-93-4	Endrin aldehyde	810	U
5103-71-9	alpha-Chlordane	420	U
5103-74-2	gamma-Chlordane	420	U
8001-35-2	Toxaphene	42000	U
12674-11-2	Aroclor-1016	8100	U
11104-28-2	Aroclor-1221	17000	U
11141-16-5	Aroclor-1232	8100	U
53469-21-9	Aroclor-1242	8100	U
12672-29-6	Aroclor-1248	8100	U
11097-69-1	Aroclor-1254	8100	U
11096-82-5	Aroclor-1260	300000	PCBD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY16

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477486

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077486B18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 62 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	26	U
74-83-9	Bromomethane	26	U
75-01-4	Vinyl Chloride	26	U
75-00-3	Chloroethane	26	U
75-09-2	Methylene Chloride	120	B
67-64-1	Acetone	420	B
75-15-0	Carbon Disulfide	26	U
75-35-4	1,1-Dichloroethene	26	U
75-34-3	1,1-Dichloroethane	26	U
540-59-0	1,2-Dichloroethene (total)	26	U
67-66-3	Chloroform	26	U
107-06-2	1,2-Dichloroethane	26	U
78-93-3	2-Butanone	160	
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon Tetrachloride	26	U
75-27-4	Bromodichloromethane	26	U
78-87-5	1,2-Dichloropropane	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
79-01-6	Trichloroethene	26	U
124-48-1	Dibromochloromethane	26	U
79-00-5	1,1,2-Trichloroethane	26	U
71-43-2	Benzene	26	U
10061-02-6	Trans-1,3-Dichloropropene	26	U
75-25-2	Bromoform	26	U
108-10-1	4-Methyl-2-Pentanone	340	
591-78-6	2-Hexanone	26	U
127-18-4	Tetrachloroethene	26	U
79-34-5	1,1,2,2-Tetrachloroethane	26	U
108-88-3	Toluene	120	
108-90-7	Chlorobenzene	26	U
100-41-4	Ethylbenzene	100	
100-42-5	Styrene	26	U
1330-20-7	Xylene (total)	690	

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY16

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477486

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GRD77486B08

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 62 decanted: (Y/N) N Date Extracted: 02/16/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/18/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	17000	U
111-44-4	bis(2-Chloroethyl)Ether	17000	U
95-57-8	2-Chlorophenol	17000	U
541-73-1	1,3-Dichlorobenzene	17000	U
106-46-7	1,4-Dichlorobenzene	17000	U
95-50-1	1,2-Dichlorobenzene	17000	U
95-48-7	2-Methylphenol	17000	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	17000	U
106-44-5	4-Methylphenol	17000	U
621-64-7	N-Nitroso-Di-n-Propylamine	17000	U
67-72-1	Hexachloroethane	17000	U
98-95-3	Nitrobenzene	17000	U
78-59-1	Isophorone	17000	U
88-75-5	2-Nitrophenol	17000	U
105-67-9	2,4-Dimethylphenol	17000	U
111-91-1	bis(2-Chloroethoxy)Methane	17000	U
120-83-2	2,4-Dichlorophenol	17000	U
120-82-1	1,2,4-Trichlorobenzene	17000	U
91-20-3	Naphthalene	4500	J
106-47-8	4-Chloroaniline	17000	U
87-68-3	Hexachlorobutadiene	17000	U
59-50-7	4-Chloro-3-Methylphenol	17000	U
91-57-6	2-Methylnaphthalene	8000	J
77-47-4	Hexachlorocyclopentadiene	17000	U
88-06-2	2,4,6-Trichlorophenol	17000	U
95-95-4	2,4,5-Trichlorophenol	42000	U
91-58-7	2-Chloronaphthalene	17000	U
88-74-4	2-Nitroaniline	42000	U
131-11-3	Dimethyl Phthalate	17000	U
208-96-8	Acenaphthylene	17000	U
606-20-2	2,6-Dinitrotoluene	17000	U
99-09-2	3-Nitroaniline	42000	U
83-32-9	Acenaphthene	17000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY16

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477486

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GRD77486B08

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 62 decanted: (Y/N) N Date Extracted: 02/16/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/18/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	42000	U
100-02-7	4-Nitrophenol	42000	U
132-64-9	Dibenzofuran	17000	U
121-14-2	2,4-Dinitrotoluene	17000	U
84-66-2	Diethylphthalate	17000	U
7005-72-3	4-Chlorophenyl-phenylether	17000	U
86-73-7	Fluorene	2600	J
100-01-6	4-Nitroaniline	42000	U
534-52-1	4,6-Dinitro-2-Methylphenol	42000	U
86-30-6	N-Nitrosodiphenylamine (1)	17000	U
101-55-3	4-Bromophenyl-phenylether	17000	U
118-74-1	Hexachlorobenzene	17000	U
87-86-5	Pentachlorophenol	42000	U
85-01-8	Phenanthrene	6500	J
120-12-7	Anthracene	17000	U
86-74-8	Carbazole	17000	U
84-74-2	Di-n-Butylphthalate	17000	U
206-44-0	Fluoranthene	4900	J
129-00-0	Pyrene	11000	J
85-68-7	Butylbenzylphthalate	17000	U
91-94-1	3,3'-Dichlorobenzidine	17000	U
56-55-3	Benzo(a)Anthracene	5200	J
218-01-9	Chrysene	4300	J
117-81-7	bis(2-Ethylhexyl)Phthalate	7500	J
117-84-0	Di-n-Octyl Phthalate	17000	U
205-99-2	Benzo(b)Fluoranthene	3900	J
207-08-9	Benzo(k)Fluoranthene	17000	U
50-32-8	Benzo(a)Pyrene	3700	J
193-39-5	Indeno(1,2,3-cd)Pyrene	17000	U
53-70-3	Dibenz(a,h)Anthracene	17000	U
191-24-2	Benzo(g,h,i)Perylene	7800	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY16

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477486

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GRD77486B08

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 62 decanted: (Y/N) N Date Extracted: 02/16/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/18/92

Injection Volume: 2.0(uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 6.0

Number TICs found: 20

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	11.32	63000	J
2.		UNKNOWN HYDROCARBON	11.79	97000	J
3.		UNKNOWN HYDROCARBON	11.97	65000	J
4.		UNKNOWN HYDROCARBON	12.14	67000	J
5.		UNKNOWN HYDROCARBON	12.25	110000	J
6.		UNKNOWN HYDROCARBON	12.42	77000	J
7.		UNKNOWN HYDROCARBON	12.54	93000	J
8.		UNKNOWN	12.70	70000	J
9.		UNKNOWN HYDROCARBON	12.87	150000	J
10.		UNKNOWN	12.97	61000	J
11.		UNKNOWN HYDROCARBON	13.32	130000	J
12.		UNKNOWN CYCLIC HYDROCARBON	13.65	82000	J
13.		UNKNOWN HYDROCARBON	13.79	130000	J
14.		UNKNOWN HYDROCARBON	14.10	130000	J
15.		UNKNOWN HYDROCARBON	14.32	110000	J
16.		UNKNOWN HYDROCARBON	14.40	56000	J
17.		UNKNOWN HYDROCARBON	14.95	140000	J
18.		UNKNOWN	15.09	93000	J
19.		UNKNOWN	15.70	120000	J
20.		UNKNOWN	16.62	90000	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY16

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477486

Sample wt/vol: 30.40 (g/ml) G Lab File ID:

% Moisture: 62 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.1	JP
319-85-7	beta-BHC	3.9	JP
319-86-8	delta-BHC	4.4	U
58-89-9	gamma-BHC (Lindane)	4.4	P
76-44-8	Heptachlor	0.16	JPB
309-00-2	Aldrin	2.6	JP
1024-57-3	Heptachlor epoxide	4.4	U
959-98-8	Endosulfan I	0.37	JP
60-57-1	Dieldrin	37	P
72-55-9	4,4'-DDE	13	P
72-20-8	Endrin	46	P
33213-65-9	Endosulfan II	64	P
72-54-8	4,4'-DDD	8.6	U
1031-07-8	Endosulfan sulfate	19	P
50-29-3	4,4'-DDT	8.6	U
72-43-5	Methoxychlor	180	PB
53494-70-5	Endrin ketone	8.6	U
7421-93-4	Endrin aldehyde	53	P
5103-71-9	alpha-Chlordane	11	P
5103-74-2	gamma-Chlordane	11	P
8001-35-2	Toxaphene	440	U
12674-11-2	Aroclor-1016	86	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	86	U
53469-21-9	Aroclor-1242	86	U
12672-29-6	Aroclor-1248	86	U
11097-69-1	Aroclor-1254	86	U
11096-82-5	Aroclor-1260	86	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY17

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477487

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077487A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 22 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	45	B
67-64-1	Acetone	28	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	Trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY17

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477487

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GRD77487A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	840	U
111-44-4	bis(2-Chloroethyl)Ether	840	U
95-57-8	2-Chlorophenol	840	U
541-73-1	1,3-Dichlorobenzene	840	U
106-46-7	1,4-Dichlorobenzene	840	U
95-50-1	1,2-Dichlorobenzene	840	U
95-48-7	2-Methylphenol	840	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	840	U
106-44-5	4-Methylphenol	840	U
621-64-7	N-Nitroso-Di-n-Propylamine	840	U
67-72-1	Hexachloroethane	840	U
98-95-3	Nitrobenzene	840	U
78-59-1	Isophorone	840	U
88-75-5	2-Nitrophenol	840	U
105-67-9	2,4-Dimethylphenol	840	U
111-91-1	bis(2-Chloroethoxy)Methane	840	U
120-83-2	2,4-Dichlorophenol	840	U
120-82-1	1,2,4-Trichlorobenzene	840	U
91-20-3	Naphthalene	840	U
106-47-8	4-Chloroaniline	840	U
87-68-3	Hexachlorobutadiene	840	U
59-50-7	4-Chloro-3-Methylphenol	840	U
91-57-6	2-Methylnaphthalene	840	U
77-47-4	Hexachlorocyclopentadiene	840	U
88-06-2	2,4,6-Trichlorophenol	840	U
95-95-4	2,4,5-Trichlorophenol	2000	U
91-58-7	2-Chloronaphthalene	840	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethyl Phthalate	840	U
208-96-8	Acenaphthylene	840	U
606-20-2	2,6-Dinitrotoluene	840	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	98	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY17

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477487

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GRD77487A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2000	U
100-02-7	4-Nitrophenol	2000	U
132-64-9	Dibenzofuran	840	U
121-14-2	2,4-Dinitrotoluene	840	U
84-66-2	Diethylphthalate	840	U
7005-72-3	4-Chlorophenyl-phenylether	840	U
86-73-7	Fluorene	840	U
100-01-6	4-Nitroaniline	2000	U
534-52-1	4,6-Dinitro-2-Methylphenol	2000	U
86-30-6	N-Nitrosodiphenylamine (1)	840	U
101-55-3	4-Bromophenyl-phenylether	840	U
118-74-1	Hexachlorobenzene	840	U
87-86-5	Pentachlorophenol	2000	U
85-01-8	Phenanthrene	620	J
120-12-7	Anthracene	840	U
86-74-8	Carbazole	100	J
84-74-2	Di-n-Butylphthalate	840	U
206-44-0	Fluoranthene	1200	
129-00-0	Pyrene	920	
85-68-7	Butylbenzylphthalate	840	U
91-94-1	3,3'-Dichlorobenzidine	840	U
56-55-3	Benzo(a)Anthracene	630	J
218-01-9	Chrysene	610	J
117-81-7	bis(2-Ethylhexyl)Phthalate	840	U
117-84-0	Di-n-Octyl Phthalate	840	U
205-99-2	Benzo(b)Fluoranthene	1500	X
207-08-9	Benzo(k)Fluoranthene	1500	X
50-32-8	Benzo(a)Pyrene	480	J
193-39-5	Indeno(1,2,3-cd)Pyrene	600	J
53-70-3	Dibenz(a,h)Anthracene	200	J
191-24-2	Benzo(g,h,i)Perylene	520	J

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY17

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477487

Sample wt/vol: 30.2 (g/mL) G Lab File ID: GRD77487A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

PC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 23 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.47	1500	J
2.		TETRACHLOROETHANE	4.58	420	J
3.		UNKNOWN	4.70	590	J
4.		ALDOL	4.82	1300	ABJ
5.		ALDOL	4.95	2900	AJ
6.		UNKNOWN	5.03	250	J
7.		UNKNOWN	5.27	680	J
8.		UNKNOWN	5.92	850	J
9.		THIENOPYRIDINE	7.57	1100	J
10.	615-22-5	BENZOTHIAZOLE, 2-(METHYLTHIO	10.44	510	JN
11.		UNKNOWN	10.79	510	J
12.		UNKNOWN	12.44	340	J
13.		UNKNOWN	12.65	1400	J
14.		UNKNOWN	13.15	340	J
15.		UNKNOWN	13.90	420	J
16.		LABORATORY ARTIFACT	14.62	170	BJ
17.		UNKNOWN	17.20	1300	J
18.		UNKNOWN PAH	17.34	850	J
19.		UNKNOWN	18.80	340	J
20.		UNKNOWN	18.84	420	J
21.		UNKNOWN	18.89	170	J
22.		UNKNOWN	21.52	1300	J
23.		UNKNOWN	23.44	250	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY17

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477487

Sample wt/vol: 30.40 (g/ml) G Lab File ID:

% Moisture: 22 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	14	P
76-44-8	Heptachlor	16	PB
309-00-2	Aldrin	14	
1024-57-3	Heptachlor epoxide	0.19	JP
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	31	P
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	39	P
33213-65-9	Endosulfan II	2.2	JP
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	31	P
72-43-5	Methoxychlor	31	PB
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	4.2	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	0.093	JP
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077489A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 28 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	52	B
67-64-1	Acetone	25	B
75-15-0	Carbon Disulfide	14	U
75-35-4	1,1-Dichloroethene	14	U
75-34-3	1,1-Dichloroethane	14	U
540-59-0	1,2-Dichloroethene (total)	14	U
67-66-3	Chloroform	14	U
107-06-2	1,2-Dichloroethane	14	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	14	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	14	U
10061-01-5	cis-1,3-Dichloropropene	14	U
79-01-6	Trichloroethene	14	U
124-48-1	Dibromochloromethane	14	U
79-00-5	1,1,2-Trichloroethane	14	U
71-43-2	Benzene	14	U
10061-02-6	Trans-1,3-Dichloropropene	14	U
75-25-2	Bromoform	14	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	14	U
108-88-3	Toluene	14	U
108-90-7	Chlorobenzene	14	U
100-41-4	Ethylbenzene	14	U
100-42-5	Styrene	14	U
1330-20-7	Xylene (total)	14	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077489C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	450	U
111-44-4	bis(2-Chloroethyl)Ether	450	U
95-57-8	2-Chlorophenol	450	U
541-73-1	1,3-Dichlorobenzene	450	U
106-46-7	1,4-Dichlorobenzene	450	U
95-50-1	1,2-Dichlorobenzene	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-Di-n-Propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	bis(2-Chloroethoxy)Methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
120-82-1	1,2,4-Trichlorobenzene	450	U
91-20-3	Naphthalene	450	U
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
59-50-7	4-Chloro-3-Methylphenol	450	U
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	1100	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethyl Phthalate	450	U
208-96-8	Acenaphthylene	450	U
606-20-2	2,6-Dinitrotoluene	450	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	89	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077489C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	450	U
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
86-73-7	Fluorene	66	J
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-Methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamine (1)	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	1200	
120-12-7	Anthracene	140	J
86-74-8	Carbazole	180	J
84-74-2	Di-n-Butylphthalate	450	U
206-44-0	Fluoranthene	3700	E
129-00-0	Pyrene	2700	
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)Anthracene	1700	
218-01-9	Chrysene	1600	
117-81-7	bis(2-Ethylhexyl)Phthalate	450	U
117-84-0	Di-n-Octyl Phthalate	450	U
205-99-2	Benzo(b)Fluoranthene	4600	EX
207-08-9	Benzo(k)Fluoranthene	4600	EX
50-32-8	Benzo(a)Pyrene	1200	
193-39-5	Indeno(1,2,3-cd)Pyrene	980	
53-70-3	Dibenz(a,h)Anthracene	350	J
191-24-2	Benzo(g,h,i)Perylene	950	

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GR077489C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/10/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 23

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.25	410	J
2.		UNKNOWN ALKENE	4.37	410	J
3.		UNKNOWN ALKENE	4.50	2200	J
4.		TETRACHLOROETHANE	4.62	320	J
5.		UNKNOWN	4.72	1500	J
6.		ALDOL	4.83	270	ABJ
7.		ALDOL	4.97	460	AJ
8.		UNKNOWN	5.07	370	J
9.		UNKNOWN	5.28	1100	J
10.		ALDOL	5.47	180	AJ
11.		UNKNOWN	5.93	1500	J
12.		UNKNOWN	7.40	180	J
13.		UNKNOWN	7.58	270	J
14.		UNKNOWN	12.32	180	J
15.	57-10-3	HEXADECANOIC ACID	12.40	230	JN
16.		UNKNOWN PAH	12.47	180	J
17.		UNKNOWN PNA	12.77	180	J
18.		UNKNOWN	16.07	460	J
19.		UNKNOWN HYDROCARBON	17.20	6900	J
20.		BENZOPYRENE	17.37	1500	J
21.		UNKNOWN	18.29	1400	J
22.		UNKNOWN	18.85	9100	J
23.		UNKNOWN	21.47	4000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY18DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GDJ77489A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	900	U
111-44-4	bis(2-Chloroethyl)Ether	900	U
95-57-8	2-Chlorophenol	900	U
541-73-1	1,3-Dichlorobenzene	900	U
106-46-7	1,4-Dichlorobenzene	900	U
95-50-1	1,2-Dichlorobenzene	900	U
95-48-7	2-Methylphenol	900	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	900	U
106-44-5	4-Methylphenol	900	U
621-64-7	N-Nitroso-Di-n-Propylamine	900	U
67-72-1	Hexachloroethane	900	U
98-95-3	Nitrobenzene	900	U
78-59-1	Isophorone	900	U
88-75-5	2-Nitrophenol	900	U
105-67-9	2,4-Dimethylphenol	900	U
111-91-1	bis(2-Chloroethoxy)Methane	900	U
120-83-2	2,4-Dichlorophenol	900	U
120-82-1	1,2,4-Trichlorobenzene	900	U
91-20-3	Naphthalene	900	U
106-47-8	4-Chloroaniline	900	U
87-68-3	Hexachlorobutadiene	900	U
59-50-7	4-Chloro-3-Methylphenol	900	U
91-57-6	2-Methylnaphthalene	900	U
77-47-4	Hexachlorocyclopentadiene	900	U
88-06-2	2,4,6-Trichlorophenol	900	U
95-95-4	2,4,5-Trichlorophenol	2200	U
91-58-7	2-Chloronaphthalene	900	U
88-74-4	2-Nitroaniline	2200	U
131-11-3	Dimethyl Phthalate	900	U
208-96-8	Acenaphthylene	900	U
606-20-2	2,6-Dinitrotoluene	900	U
99-09-2	3-Nitroaniline	2200	U
83-32-9	Acenaphthene	110	DJ

ORIGINAL

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY18DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GDJ77489A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2200	U
100-02-7	4-Nitrophenol	2200	U
132-64-9	Dibenzofuran	900	U
121-14-2	2,4-Dinitrotoluene	900	U
84-66-2	Diethylphthalate	390	DJ
7005-72-3	4-Chlorophenyl-phenylether	900	U
86-73-7	Fluorene	92	DJ
100-01-6	4-Nitroaniline	2200	U
534-52-1	4,6-Dinitro-2-Methylphenol	2200	U
86-30-6	N-Nitrosodiphenylamine (1)	900	U
101-55-3	4-Bromophenyl-phenylether	900	U
118-74-1	Hexachlorobenzene	900	U
87-86-5	Pentachlorophenol	2200	U
85-01-8	Phenanthrene	1400	D
120-12-7	Anthracene	240	DJ
86-74-8	Carbazole	260	DJ
84-74-2	Di-n-Butylphthalate	900	U
206-44-0	Fluoranthene	3900	D
129-00-0	Pyrene	3300	D
85-68-7	Butylbenzylphthalate	900	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)Anthracene	1700	D
218-01-9	Chrysene	2100	D
117-81-7	bis(2-Ethylhexyl)Phthalate	900	U
117-84-0	Di-n-Octyl Phthalate	900	U
205-99-2	Benzo(b)Fluoranthene	4400	DX
207-08-9	Benzo(k)Fluoranthene	4400	DX
50-32-8	Benzo(a)Pyrene	1900	D
193-39-5	Indeno(1,2,3-cd)Pyrene	1700	D
53-70-3	Dibenz(a,h)Anthracene	590	DJ
191-24-2	Benzo(g,h,i)Perylene	1800	D

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY18DL

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GDJ77489A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 28 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.1

Number TICs found: 26 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKENE	4.37	1200	J
2.		TETRACHLOROETHANE	4.48	370	J
3.		UNKNOWN	4.58	1900	J
4.		ALDOL	4.72	820	ABJ
5.		UNKNOWN	4.95	370	J
6.		UNKNOWN	5.17	1300	J
7.		UNKNOWN	5.82	1600	J
8.		UNKNOWN	7.47	370	J
9.		BLANK CONTAMINANT	7.80	820	BJ
10.		BLANK CONTAMINANT	9.09	910	BJ
11.		UNKNOWN SUBST. PROPANOIC ACI	10.05	1700	J
12.		BLANK CONTAMINANT	11.17	2300	J
13.		UNKNOWN SILOXANE	12.02	2300	BJ
14.	57-10-3	HEXADECANOIC ACID	12.29	370	JN
15.		UNKNOWN	12.55	640	J
16.		UNKNOWN PNA	12.64	270	J
17.		UNKNOWN SILOXANE	12.80	2000	J
18.		UNKNOWN SILOXANE	14.17	1800	J
19.		LAB. ARTIFACT	14.50	370	BJ
20.		UNKNOWN SILOXANE	14.79	1600	J
21.		UNKNOWN SILOXANE	15.40	1300	J
22.		UNKNOWN HYDROCARBON	15.95	550	J
23.		UNKNOWN SILOXANE	16.02	1000	J
24.		UNKNOWN HYDROCARBON	17.05	5400	J
25.		UNKNOWN PAH	17.17	2700	J
26.		UNKNOWN	18.67	7200	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY18

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477489 R1

Sample wt/vol: 30.00 (g/ml) G Lab File ID:

% Moisture: 28 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/16/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/18/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.1 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	0.36	JP
1024-57-3	Heptachlor epoxide	0.54	JP
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	0.27	JP
72-55-9	4,4'-DDE	2.8	J
72-20-8	Endrin	2.6	JPB
33213-65-9	Endosulfan II	2.6	J
72-54-8	4,4'-DDD	4.6	U
1031-07-8	Endosulfan sulfate	4.6	U
50-29-3	4,4'-DDT	0.48	JP
72-43-5	Methoxychlor	18	JPB
53494-70-5	Endrin ketone	4.6	U
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	2.4	U
5103-74-2	gamma-Chlordane	0.23	JP
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY19

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477490

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077490A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 24 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	47	B
67-64-1	Acetone	57	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	Trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY19

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HO SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477490

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GRD77490A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	860	U
111-44-4	bis(2-Chloroethyl)Ether	860	U
95-57-8	2-Chlorophenol	860	U
541-73-1	1,3-Dichlorobenzene	860	U
106-46-7	1,4-Dichlorobenzene	860	U
95-50-1	1,2-Dichlorobenzene	860	U
95-48-7	2-Methylphenol	860	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	860	U
106-44-5	4-Methylphenol	860	U
621-64-7	N-Nitroso-Di-n-Propylamine	860	U
67-72-1	Hexachloroethane	860	U
98-95-3	Nitrobenzene	860	U
78-59-1	Isophorone	860	U
88-75-5	2-Nitrophenol	860	U
105-67-9	2,4-Dimethylphenol	860	U
111-91-1	bis(2-Chloroethoxy)Methane	860	U
120-83-2	2,4-Dichlorophenol	860	U
120-82-1	1,2,4-Trichlorobenzene	860	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	860	U
87-68-3	Hexachlorobutadiene	860	U
59-50-7	4-Chloro-3-Methylphenol	860	U
91-57-6	2-Methylnaphthalene	95	J
77-47-4	Hexachlorocyclopentadiene	860	U
88-06-2	2,4,6-Trichlorophenol	860	U
95-95-4	2,4,5-Trichlorophenol	2100	U
91-58-7	2-Chloronaphthalene	860	U
88-74-4	2-Nitroaniline	2100	U
131-11-3	Dimethyl Phthalate	860	U
208-96-8	Acenaphthylene	860	U
606-20-2	2,6-Dinitrotoluene	860	U
99-09-2	3-Nitroaniline	2100	U
83-32-9	Acenaphthene	440	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY19

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477490

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GRD77490A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2100	U
100-02-7	4-Nitrophenol	2100	U
132-64-9	Dibenzofuran	130	J
121-14-2	2,4-Dinitrotoluene	860	U
84-66-2	Diethylphthalate	860	U
7005-72-3	4-Chlorophenyl-phenylether	860	U
86-73-7	Fluorene	180	J
100-01-6	4-Nitroaniline	2100	U
534-52-1	4,6-Dinitro-2-Methylphenol	2100	U
86-30-6	N-Nitrosodiphenylamine (1)	860	U
101-55-3	4-Bromophenyl-phenylether	860	U
118-74-1	Hexachlorobenzene	860	U
87-86-5	Pentachlorophenol	2100	U
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	450	J
86-74-8	Carbazole	330	J
84-74-2	Di-n-Butylphthalate	860	U
206-44-0	Fluoranthene	4100	
129-00-0	Pyrene	2000	
85-68-7	Butylbenzylphthalate	860	U
91-94-1	3,3'-Dichlorobenzidine	860	U
56-55-3	Benzo(a)Anthracene	1400	
218-01-9	Chrysene	1500	
117-81-7	bis(2-Ethylhexyl)Phthalate	860	U
117-84-0	Di-n-Octyl Phthalate	860	U
205-99-2	Benzo(b)Fluoranthene	3000	X
207-08-9	Benzo(k)Fluoranthene	3000	X
50-32-8	Benzo(a)Pyrene	1600	
193-39-5	Indeno(1,2,3-cd)Pyrene	1100	
53-70-3	Dibenz(a,h)Anthracene	400	J
191-24-2	Benzo(g,h,i)Perylene	1000	

(1) - Cannot be separated from Diphenylamine

ORIGINAL
Red

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY19

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477490

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GRD77490A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 24 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) Y pH: 6.2

Number TICs found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.18	430	J
2.		UNKNOWN ALKENE	4.30	690	J
3.		UNKNOWN	4.45	5500	J
4.		TETRACHLOROETHANE	4.55	610	J
5.		UNKNOWN	4.65	2900	J
6.		ALDOL	4.80	1000	ABJ
7.		UNKNOWN	4.95	350	J
8.		UNKNOWN	5.02	610	J
9.		UNKNOWN	5.25	2400	J
10.		UNKNOWN	5.90	1200	J
11.		BLANK CONTAMINANT	11.27	260	BJ
12.		UNKNOWN PAH	12.45	350	J
13.		UNKNOWN PNA	12.75	350	J
14.		UNKNOWN	17.19	1000	J
15.		UNKNOWN PAH	17.32	1300	J
16.		UNKNOWN	18.27	350	J
17.		UNKNOWN	18.72	350	J
18.		UNKNOWN	18.77	430	J
19.		UNKNOWN	18.84	350	J
20.		UNKNOWN	21.47	780	J
21.		UNKNOWN	21.54	870	J
22.		UNKNOWN	23.45	610	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY19

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477490

Sample wt/vol: 30.30 (g/ml) G Lab File ID:

% Moisture: 24 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.2 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	0.081	JP
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	0.15	JPB
309-00-2	Aldrin	0.39	JP
1024-57-3	Heptachlor epoxide	0.41	JP
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	0.10	JP
72-55-9	4,4'-DDE	1.1	J
72-20-8	Endrin	1.5	JP
33213-65-9	Endosulfan II	0.48	JP
72-54-8	4,4'-DDD	4.3	U
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	4.3	U
72-43-5	Methoxychlor	6.5	JPB
53494-70-5	Endrin ketone	4.3	U
7421-93-4	Endrin aldehyde	4.3	U
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	87	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY20

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077491A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 35 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	70	B
67-64-1	Acetone	69	B
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	Trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY20

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77491C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 15.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	7500	U
111-44-4	bis(2-Chloroethyl)Ether	7500	U
95-57-8	2-Chlorophenol	7500	U
541-73-1	1,3-Dichlorobenzene	7500	U
106-46-7	1,4-Dichlorobenzene	7500	U
95-50-1	1,2-Dichlorobenzene	7500	U
95-48-7	2-Methylphenol	7500	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	7500	U
106-44-5	4-Methylphenol	7500	U
621-64-7	N-Nitroso-Di-n-Propylamine	7500	U
67-72-1	Hexachloroethane	7500	U
98-95-3	Nitrobenzene	7500	U
78-59-1	Isophorone	7500	U
88-75-5	2-Nitrophenol	7500	U
105-67-9	2,4-Dimethylphenol	7500	U
111-91-1	bis(2-Chloroethoxy)Methane	7500	U
120-83-2	2,4-Dichlorophenol	7500	U
120-82-1	1,2,4-Trichlorobenzene	7500	U
91-20-3	Naphthalene	2500	J
106-47-8	4-Chloroaniline	7500	U
87-68-3	Hexachlorobutadiene	7500	U
59-50-7	4-Chloro-3-Methylphenol	7500	U
91-57-6	2-Methylnaphthalene	790	J
77-47-4	Hexachlorocyclopentadiene	7500	U
88-06-2	2,4,6-Trichlorophenol	7500	U
95-95-4	2,4,5-Trichlorophenol	18000	U
91-58-7	2-Chloronaphthalene	7500	U
88-74-4	2-Nitroaniline	18000	U
131-11-3	Dimethyl Phthalate	7500	U
208-96-8	Acenaphthylene	7500	U
606-20-2	2,6-Dinitrotoluene	7500	U
99-09-2	3-Nitroaniline	18000	U
83-32-9	Acenaphthene	9000	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY20

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77491C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 15.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	18000	U
100-02-7	4-Nitrophenol	18000	U
132-64-9	Dibenzofuran	2900	J
121-14-2	2,4-Dinitrotoluene	7500	U
84-66-2	Diethylphthalate	7500	U
7005-72-3	4-Chlorophenyl-phenylether	7500	U
86-73-7	Fluorene	4100	J
100-01-6	4-Nitroaniline	18000	U
534-52-1	4,6-Dinitro-2-Methylphenol	18000	U
86-30-6	N-Nitrosodiphenylamine (1)	7500	U
101-55-3	4-Bromophenyl-phenylether	7500	U
118-74-1	Hexachlorobenzene	7500	U
87-86-5	Pentachlorophenol	18000	U
85-01-8	Phenanthrene	75000	E
120-12-7	Anthracene	14000	
86-74-8	Carbazole	11000	
84-74-2	Di-n-Butylphthalate	7500	U
206-44-0	Fluoranthene	110000	E
129-00-0	Pyrene	51000	
85-68-7	Butylbenzylphthalate	7500	U
91-94-1	3,3'-Dichlorobenzidine	7500	U
56-55-3	Benzo(a)Anthracene	33000	
218-01-9	Chrysene	32000	
117-81-7	bis(2-Ethylhexyl)Phthalate	1600	J
117-84-0	Di-n-Octyl Phthalate	7500	U
205-99-2	Benzo(b)Fluoranthene	65000	EX
207-08-9	Benzo(k)Fluoranthene	65000	EX
50-32-8	Benzo(a)Pyrene	30000	
193-39-5	Indeno(1,2,3-cd)Pyrene	11000	
53-70-3	Dibenz(a,h)Anthracene	5300	J
191-24-2	Benzo(g,h,i)Perylene	7600	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CHY20

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRD77491C21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/11/92

Injection Volume: 2.0(uL) Dilution Factor: 15.0

GPC Cleanup: (Y/N) Y pH: 6.7

Number TICs found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		ALDOL	4.85	3800	ABJ
2.		BLANK CONTAMINANT	9.22	2300	BJ
3.		HYDROXYNAPHTHALENEDIONE	9.79	23000	J
4.		UNKNOWN PAH	12.50	7600	J
5.		UNKNOWN PAH	13.82	7600	J
6.		UNKNOWN PAH	13.95	8300	J
7.		BENZO FLUORENE	14.12	18000	J
8.		BENZOFLUORENE	14.20	11000	J
9.		METHYL PYRENE	14.25	8300	J
10.		UNKNOWN PAH	14.29	7600	J
11.		UNKNOWN PAH	14.82	8300	J
12.		UNKNOWN PAH	14.99	12000	J
13.		UNKNOWN PAH	15.02	7600	J
14.		UNKNOWN PAH	15.05	13000	J
15.		UNKNOWN PAH	15.12	7600	J
16.		UNKNOWN PAH	15.49	12000	J
17.		UNKNOWN PAH	15.64	9800	J
18.		UNKNOWN PAH	15.69	7600	J
19.		UNKNOWN PAH	15.89	15000	J
20.		UNKNOWN	16.10	17000	J
21.		BENZOFLUORANTHENE	17.09	6100	J
22.		BENZOFLUORANTHENE	17.40	22000	J

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY20DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GDJ77491A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/13/92

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	15000	U
111-44-4	bis(2-Chloroethyl)Ether	15000	U
95-57-8	2-Chlorophenol	15000	U
541-73-1	1,3-Dichlorobenzene	15000	U
106-46-7	1,4-Dichlorobenzene	15000	U
95-50-1	1,2-Dichlorobenzene	15000	U
95-48-7	2-Methylphenol	15000	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	15000	U
106-44-5	4-Methylphenol	15000	U
621-64-7	N-Nitroso-Di-n-Propylamine	15000	U
67-72-1	Hexachloroethane	15000	U
98-95-3	Nitrobenzene	15000	U
78-59-1	Isophorone	15000	U
88-75-5	2-Nitrophenol	15000	U
105-67-9	2,4-Dimethylphenol	15000	U
111-91-1	bis(2-Chloroethoxy)Methane	15000	U
120-83-2	2,4-Dichlorophenol	15000	U
120-82-1	1,2,4-Trichlorobenzene	15000	U
91-20-3	Naphthalene	2700	DJ
106-47-8	4-Chloroaniline	15000	U
87-68-3	Hexachlorobutadiene	15000	U
59-50-7	4-Chloro-3-Methylphenol	15000	U
91-57-6	2-Methylnaphthalene	15000	U
77-47-4	Hexachlorocyclopentadiene	15000	U
88-06-2	2,4,6-Trichlorophenol	15000	U
95-95-4	2,4,5-Trichlorophenol	36000	U
91-58-7	2-Chloronaphthalene	15000	U
88-74-4	2-Nitroaniline	36000	U
131-11-3	Dimethyl Phthalate	15000	U
208-96-8	Acenaphthylene	15000	U
606-20-2	2,6-Dinitrotoluene	15000	U
99-09-2	3-Nitroaniline	36000	U
83-32-9	Acenaphthene	10000	DJ

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY20DL

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GDJ77491A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/13/92

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	36000	U
100-02-7	4-Nitrophenol	36000	U
132-64-9	Dibenzofuran	3100	DJ
121-14-2	2,4-Dinitrotoluene	15000	U
84-66-2	Diethylphthalate	3000	DJ
7005-72-3	4-Chlorophenyl-phenylether	15000	U
86-73-7	Fluorene	4900	DJ
100-01-6	4-Nitroaniline	36000	U
534-52-1	4,6-Dinitro-2-Methylphenol	36000	U
86-30-6	N-Nitrosodiphenylamine (1)	15000	U
101-55-3	4-Bromophenyl-phenylether	15000	U
118-74-1	Hexachlorobenzene	15000	U
87-86-5	Pentachlorophenol	36000	U
85-01-8	Phenanthrene	52000	D
120-12-7	Anthracene	13000	DJ
86-74-8	Carbazole	7900	DJ
84-74-2	Di-n-Butylphthalate	15000	U
206-44-0	Fluoranthene	72000	D
129-00-0	Pyrene	54000	D
85-68-7	Butylbenzylphthalate	15000	U
91-94-1	3,3'-Dichlorobenzidine	15000	U
56-55-3	Benzo(a)Anthracene	29000	D
218-01-9	Chrysene	27000	D
117-81-7	bis(2-Ethylhexyl)Phthalate	2600	DJ
117-84-0	Di-n-Octyl Phthalate	15000	U
205-99-2	Benzo(b)Fluoranthene	45000	DX
207-08-9	Benzo(k)Fluoranthene	45000	DX
50-32-8	Benzo(a)Pyrene	24000	D
193-39-5	Indeno(1,2,3-cd)Pyrene	15000	D
53-70-3	Dibenz(a,h)Anthracene	6000	DJ
191-24-2	Benzo(g,h,i)Perylene	13000	DJ

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY20DL

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GDJ77491A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/13/92

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.7

Number TICs found: 24 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		BLANK CONTAMINANT	7.87	6100	BJ
2.		BLANK CONTAMINANT	9.14	7600	BJ
3.		HYDROXY NAPHTHALENEDIONE	9.69	20000	J
4.		BLANK CONTAMINANT	11.20	24000	BJ
5.		UNKNOWN SILOXANE	12.05	27000	J
6.		UNKNOWN PAH	12.27	4500	J
7.		UNKNOWN PAH	12.37	12000	J
8.		UNKNOWN	12.59	7600	J
9.		UNKNOWN SILOXANE	12.84	27000	J
10.		UNKNOWN PAH	13.99	6100	J
11.		UNKNOWN PAH	14.09	4500	J
12.		UNKNOWN PAH	14.14	3000	J
13.		UNKNOWN SILOXANE	14.19	24000	J
14.		LABORATORY ARTIFACT	14.54	4500	BJ
15.		UNKNOWN SILOXANE	14.82	21000	J
16.		UNKNOWN SILOXANE	15.42	15000	J
17.		UNKNOWN	15.97	3000	J
18.		UNKNOWN SILOXANE	16.04	12000	J
19.		UNKNOWN	16.55	7600	J
20.		UNKNOWN	17.07	6100	J
21.		BENZO FLUORANTHENE	17.19	18000	J
22.		UNKNOWN	17.55	6100	J
23.		UNKNOWN	20.60	4500	J
24.		UNKNOWN	23.45	26000	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY20

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477491

Sample wt/vol: 30.40 (g/ml) G Lab File ID:

% Moisture: 35 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/07/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.6	U
319-85-7	beta-BHC	1.3	JP
319-86-8	delta-BHC	2.6	U
58-89-9	gamma-BHC (Lindane)	2.6	U
76-44-8	Heptachlor	1.8	JPB
309-00-2	Aldrin	5.6	P
1024-57-3	Heptachlor epoxide	2.3	JP
959-98-8	Endosulfan I	2.6	U
60-57-1	Dieldrin	14	P
72-55-9	4,4'-DDE	11	
72-20-8	Endrin	34	P
33213-65-9	Endosulfan II	20	P
72-54-8	4,4'-DDD	5.0	U
1031-07-8	Endosulfan sulfate	5.0	U
50-29-3	4,4'-DDT	5.0	U
72-43-5	Methoxychlor	120	PB
53494-70-5	Endrin ketone	5.0	U
7421-93-4	Endrin aldehyde	17	P
5103-71-9	alpha-Chlordane	2.6	U
5103-74-2	gamma-Chlordane	2.8	P
8001-35-2	Toxaphene	260	U
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	100	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY21

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477492

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077492A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 35 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	51	B
67-64-1	Acetone	86	B
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	Trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY21

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477492

Sample wt/vol: 30.4 (g/mL) G Lab File ID: G2D77492A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2500	U
111-44-4	bis(2-Chloroethyl)Ether	2500	U
95-57-8	2-Chlorophenol	2500	U
541-73-1	1,3-Dichlorobenzene	2500	U
106-46-7	1,4-Dichlorobenzene	2500	U
95-50-1	1,2-Dichlorobenzene	2500	U
95-48-7	2-Methylphenol	2500	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	2500	U
106-44-5	4-Methylphenol	2500	U
621-64-7	N-Nitroso-Di-n-Propylamine	2500	U
67-72-1	Hexachloroethane	2500	U
98-95-3	Nitrobenzene	2500	U
78-59-1	Isophorone	2500	U
88-75-5	2-Nitrophenol	2500	U
105-67-9	2,4-Dimethylphenol	2500	U
111-91-1	bis(2-Chloroethoxy)Methane	2500	U
120-83-2	2,4-Dichlorophenol	2500	U
120-82-1	1,2,4-Trichlorobenzene	2500	U
91-20-3	Naphthalene	2500	U
106-47-8	4-Chloroaniline	2500	U
87-68-3	Hexachlorobutadiene	2500	U
59-50-7	4-Chloro-3-Methylphenol	2500	U
91-57-6	2-Methylnaphthalene	2500	U
77-47-4	Hexachlorocyclopentadiene	2500	U
88-06-2	2,4,6-Trichlorophenol	2500	U
95-95-4	2,4,5-Trichlorophenol	6100	U
91-58-7	2-Chloronaphthalene	2500	U
88-74-4	2-Nitroaniline	6100	U
131-11-3	Dimethyl Phthalate	2500	U
208-96-8	Acenaphthylene	2500	U
606-20-2	2,6-Dinitrotoluene	2500	U
99-09-2	3-Nitroaniline	6100	U
83-32-9	Acenaphthene	350	J

ORIGINAL

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY21

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477492

Sample wt/vol: 30.4 (g/mL) G Lab File ID: G2D77492A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	6100	U
100-02-7	4-Nitrophenol	6100	U
132-64-9	Dibenzofuran	2500	U
121-14-2	2,4-Dinitrotoluene	2500	U
84-66-2	Diethylphthalate	2500	U
7005-72-3	4-Chlorophenyl-phenylether	2500	U
86-73-7	Fluorene	2500	U
100-01-6	4-Nitroaniline	6100	U
534-52-1	4,6-Dinitro-2-Methylphenol	6100	U
86-30-6	N-Nitrosodiphenylamine (1)	2500	U
101-55-3	4-Bromophenyl-phenylether	2500	U
118-74-1	Hexachlorobenzene	2500	U
87-86-5	Pentachlorophenol	6100	U
85-01-8	Phenanthrene	3500	
120-12-7	Anthracene	920	J
86-74-8	Carbazole	710	J
84-74-2	Di-n-Butylphthalate	2500	U
206-44-0	Fluoranthene	8800	
129-00-0	Pyrene	3500	
85-68-7	Butylbenzylphthalate	470	J
91-94-1	3,3'-Dichlorobenzidine	2500	U
56-55-3	Benzo(a)Anthracene	4500	
218-01-9	Chrysene	3800	
117-81-7	bis(2-Ethylhexyl)Phthalate	2500	U
117-84-0	Di-n-Octyl Phthalate	2500	U
205-99-2	Benzo(b)Fluoranthene	11000	X
207-08-9	Benzo(k)Fluoranthene	11000	X
50-32-8	Benzo(a)Pyrene	6900	
193-39-5	Indeno(1,2,3-cd)Pyrene	3800	
53-70-3	Dibenz(a,h)Anthracene	1700	J
191-24-2	Benzo(g,h,i)Perylene	3500	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY21

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477492

Sample wt/vol: 30.4 (g/mL) G Lab File ID: G2D77492A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 35 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 21

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		ALDOL	4.80	1500	ABJ
2.		UNKNOWN PAH	12.45	500	J
3.		UNKNOWN	16.45	500	J
4.		UNKNOWN	16.67	760	J
5.		UNKNOWN	17.04	1300	J
6.		UNKNOWN	17.20	1000	J
7.		UNKNOWN	17.25	1000	J
8.		UNKNOWN PAH	17.34	5000	J
9.		UNKNOWN	17.90	760	J
10.		UNKNOWN	17.95	1000	J
11.		UNKNOWN	18.07	1000	J
12.		UNKNOWN	18.14	1500	J
13.		UNKNOWN	18.22	500	J
14.		UNKNOWN	18.75	1500	J
15.		UNKNOWN	18.80	1000	J
16.		UNKNOWN	19.45	500	J
17.		UNKNOWN	19.50	500	J
18.		UNKNOWN	19.55	1000	J
19.		UNKNOWN	23.39	1800	J
20.		UNKNOWN	23.42	1000	J
21.		UNKNOWN	23.45	760	J

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY22

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077493A18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 20 Date Analyzed: 01/31/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	56	B
67-64-1	Acetone	61	B
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	Trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY22

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRJ77493A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	59	J
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	75	J
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	980	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	980	U
131-11-3	Dimethyl Phthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	980	U
83-32-9	Acenaphthene	410	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY22

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRJ77493A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	980	U
100-02-7	4-Nitrophenol	980	U
132-64-9	Dibenzofuran	410	U
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	410	U
100-01-6	4-Nitroaniline	980	U
534-52-1	4,6-Dinitro-2-Methylphenol	980	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	980	U
85-01-8	Phenanthrene	370	J
120-12-7	Anthracene	55	J
86-74-8	Carbazole	68	J
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	1100	
129-00-0	Pyrene	530	
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	410	
218-01-9	Chrysene	440	
117-81-7	bis(2-Ethylhexyl)Phthalate	410	U
117-84-0	Di-n-Octyl Phthalate	410	U
205-99-2	Benzo(b)Fluoranthene	1200	X
207-08-9	Benzo(k)Fluoranthene	1200	X
50-32-8	Benzo(a)Pyrene	380	J
193-39-5	Indeno(1,2,3-cd)Pyrene	450	
53-70-3	Dibenz(a,h)Anthracene	98	J
191-24-2	Benzo(g,h,i)Perylene	350	J

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY22

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.5 (g/mL) G Lab File ID: GRJ77493A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 21

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.22	410	J
2.		UNKNOWN ALKENE	4.35	570	J
3.		UNKNOWN ALKENE	4.50	4500	J
4.		UNKNOWN	4.62	820	J
5.		UNKNOWN	4.70	2000	J
6.		ALDOL	4.83	980	ABJ
7.		UNKNOWN	4.98	410	J
8.		UNKNOWN	5.07	570	J
9.		UNKNOWN	5.30	2600	J
10.		UNKNOWN	5.95	1400	J
11.		UNKNOWN	8.27	160	J
12.		UNKNOWN	16.10	160	J
13.		UNKNOWN	16.60	200	J
14.		UNKNOWN	17.22	570	J
15.		UNKNOWN	17.25	370	J
16.		UNKNOWN PAH	17.37	530	J
17.		UNKNOWN	18.32	330	J
18.		UNKNOWN	18.84	410	J
19.		UNKNOWN	18.89	570	J
20.		UNKNOWN	21.54	700	J
21.		UNKNOWN SILOXANE	23.45	250	J

ORIGINAL (Red) 1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY22RE

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GRJ77493A05

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/14/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/24/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410	U
111-44-4	bis(2-Chloroethyl)Ether	410	U
95-57-8	2-Chlorophenol	410	U
541-73-1	1,3-Dichlorobenzene	410	U
106-46-7	1,4-Dichlorobenzene	410	U
95-50-1	1,2-Dichlorobenzene	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-Di-n-Propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	bis(2-Chloroethoxy)Methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
120-82-1	1,2,4-Trichlorobenzene	410	U
91-20-3	Naphthalene	71	J
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
59-50-7	4-Chloro-3-Methylphenol	410	U
91-57-6	2-Methylnaphthalene	57	J
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	990	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	990	U
131-11-3	Dimethyl Phthalate	410	U
208-96-8	Acenaphthylene	410	U
606-20-2	2,6-Dinitrotoluene	410	U
99-09-2	3-Nitroaniline	990	U
83-32-9	Acenaphthene	150	J

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY22RE

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GRJ77493A05

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/14/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/24/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	990	U
100-02-7	4-Nitrophenol	990	U
132-64-9	Dibenzofuran	61	J
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
7005-72-3	4-Chlorophenyl-phenylether	410	U
86-73-7	Fluorene	89	J
100-01-6	4-Nitroaniline	990	U
534-52-1	4,6-Dinitro-2-Methylphenol	990	U
86-30-6	N-Nitrosodiphenylamine (1)	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
87-86-5	Pentachlorophenol	990	U
85-01-8	Phenanthrene	900	
120-12-7	Anthracene	150	J
86-74-8	Carbazole	120	J
84-74-2	Di-n-Butylphthalate	410	U
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	410	U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)Anthracene	730	
218-01-9	Chrysene	880	
117-81-7	bis(2-Ethylhexyl)Phthalate	66	J
117-84-0	Di-n-Octyl Phthalate	410	U
205-99-2	Benzo(b)Fluoranthene	1600	
207-08-9	Benzo(k)Fluoranthene	570	
50-32-8	Benzo(a)Pyrene	550	
193-39-5	Indeno(1,2,3-cd)Pyrene	970	
53-70-3	Dibenz(a,h)Anthracene	180	J
191-24-2	Benzo(g,h,i)Perylene	810	

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY22RE

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.3 (g/mL) G Lab File ID: GRJ77493A05

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 20 decanted: (Y/N) N Date Extracted: 02/14/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/24/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.4

Number TICs found: 23

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		SOLVENT CONTAMINANT	5.37	210	BJ
2.		UNKNOWN	5.67	450	J
3.		UNKNOWN ALKENE	5.72	330	J
4.		UNKNOWN ALKENE	5.85	2800	J
5.		UNKNOWN	5.88	370	J
6.		TETRACHLOROETHANE	6.02	1000	J
7.		UNKNOWN	6.08	540	J
8.		UNKNOWN	6.17	290	J
9.		ALDOL	6.22	660	ABJ
10.		ALDOL	6.33	370	ABJ
11.		UNKNOWN	6.42	740	J
12.		UNKNOWN	6.62	2000	J
13.		UNKNOWN SILOXANE	6.95	160	J
14.		UNKNOWN	7.30	1000	J
15.		UNKNOWN	8.18	160	J
16.		UNKNOWN	8.54	160	J
17.		UNKNOWN PAH	13.70	160	J
18.		UNKNOWN PNA	13.97	82	J
19.		UNKNOWN PAH	15.25	120	J
20.		UNKNOWN PAH	15.35	120	J
21.		UNKNOWN	17.67	210	J
22.		UNKNOWN	19.74	1100	J
23.		UNKNOWN PAH	20.45	910	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY22

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477493

Sample wt/vol: 30.30 (g/ml) G Lab File ID:

% Moisture: 20 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/08/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.4 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.1	U
319-85-7	beta-BHC	2.1	U
319-86-8	delta-BHC	2.1	U
58-89-9	gamma-BHC (Lindane)	2.1	U
76-44-8	Heptachlor	2.1	U
309-00-2	Aldrin	2.1	U
1024-57-3	Heptachlor epoxide	2.1	U
959-98-8	Endosulfan I	2.1	U
60-57-1	Dieldrin	6.2	P
72-55-9	4,4'-DDE	1.6	J
72-20-8	Endrin	4.1	U
33213-65-9	Endosulfan II	4.1	U
72-54-8	4,4'-DDD	4.1	U
1031-07-8	Endosulfan sulfate	4.1	U
50-29-3	4,4'-DDT	2.3	JP
72-43-5	Methoxychlor	26	PB
53494-70-5	Endrin ketone	0.66	JP
7421-93-4	Endrin aldehyde	4.1	U
5103-71-9	alpha-Chlordane	3.5	P
5103-74-2	gamma-Chlordane	2.1	P
8001-35-2	Toxaphene	210	U
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

ORIGINAL (Red)

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY23

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477494

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077494C18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 22 Date Analyzed: 02/03/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	68	B
67-64-1	Acetone	37	B
75-15-0	Carbon Disulfide	13	U
75-35-4	1,1-Dichloroethene	13	U
75-34-3	1,1-Dichloroethane	13	U
540-59-0	1,2-Dichloroethene (total)	13	U
67-66-3	Chloroform	13	U
107-06-2	1,2-Dichloroethane	13	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	13	U
56-23-5	Carbon Tetrachloride	13	U
75-27-4	Bromodichloromethane	13	U
78-87-5	1,2-Dichloropropane	13	U
10061-01-5	cis-1,3-Dichloropropene	13	U
79-01-6	Trichloroethene	13	U
124-48-1	Dibromochloromethane	13	U
79-00-5	1,1,2-Trichloroethane	13	U
71-43-2	Benzene	13	U
10061-02-6	Trans-1,3-Dichloropropene	13	U
75-25-2	Bromoform	13	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	13	U
79-34-5	1,1,2,2-Tetrachloroethane	13	U
108-88-3	Toluene	13	U
108-90-7	Chlorobenzene	13	U
100-41-4	Ethylbenzene	13	U
100-42-5	Styrene	13	U
1330-20-7	Xylene (total)	13	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY23

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HO SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477494

Sample wt/vol: 30.5 (g/mL) G Lab File ID: G2J77494A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	420	U
111-44-4	bis(2-Chloroethyl)Ether	420	U
95-57-8	2-Chlorophenol	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	420	U
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-Di-n-Propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	bis(2-Chloroethoxy)Methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
59-50-7	4-Chloro-3-Methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	1000	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethyl Phthalate	420	U
208-96-8	Acenaphthylene	420	U
606-20-2	2,6-Dinitrotoluene	420	U
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	420	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY23

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477494

Sample wt/vol: 30.5 (g/mL) G Lab File ID: G2J77494A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	54	J
7005-72-3	4-Chlorophenyl-phenylether	420	U
86-73-7	Fluorene	420	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-Methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamine (1)	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	420	U
120-12-7	Anthracene	420	U
86-74-8	Carbazole	420	U
84-74-2	Di-n-Butylphthalate	420	U
206-44-0	Fluoranthene	79	J
129-00-0	Pyrene	63	J
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)Anthracene	420	U
218-01-9	Chrysene	44	J
117-81-7	bis(2-Ethylhexyl)Phthalate	420	U
117-84-0	Di-n-Octyl Phthalate	420	U
205-99-2	Benzo(b)Fluoranthene	84	JX
207-08-9	Benzo(k)Fluoranthene	84	JX
50-32-8	Benzo(a)Pyrene	420	U
193-39-5	Indeno(1,2,3-cd)Pyrene	420	U
53-70-3	Dibenz(a,h)Anthracene	420	U
191-24-2	Benzo(g,h,i)Perylene	420	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY23

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477494

Sample wt/vol: 30.5 (g/mL) G Lab File ID: G2J77494A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 22 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

PC Cleanup: (Y/N) Y pH: 6.6

Number TICs found: 29 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.40	290	J
2.		UNKNOWN	4.62	590	J
3.		ALDOL	4.77	500	ABJ
4.		ALDOL	4.88	210	AJ
5.		BENZALDEHYDE + UNKNOWN	4.98	84	J
6.		ALDOL	5.20	970	AJ
7.		ALDOL	5.38	130	AJ
8.		UNKNOWN	5.85	1300	J
9.		BLANK CONTAMINANT	9.12	130	BJ
10.		BLANK CONTAMINANT	10.24	210	BJ
11.		BLANK CONTAMINANT	11.19	340	BJ
12.		UNKNOWN SILOXANE	12.05	420	J
13.		UNKNOWN	12.22	84	J
14.		UNKNOWN	12.27	210	J
15.		UNKNOWN CARBOXYLIC ACID	12.32	340	J
16.		UNKNOWN	12.59	130	J
17.		UNKNOWN SILOXANE	12.84	340	J
18.		BLANK CONTAMINANT	13.54	800	BJ
19.		UNKNOWN SILOXANE	14.19	590	J
20.		LABORATORY ARTIFACT	14.54	210	BJ
21.		UNKNOWN SILOXANE	14.82	500	J
22.		UNKNOWN	15.07	170	J
23.		UNKNOWN SILOXANE	15.42	380	J
24.		UNKNOWN SILOXANE	16.02	550	J
25.		UNKNOWN	16.70	630	J
26.		UNKNOWN	17.05	930	J
27.		UNKNOWN	17.15	420	J
28.		UNKNOWN	18.65	2200	J
29.		UNKNOWN	21.25	880	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY23

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477494

Sample wt/vol: 30.30 (g/ml) G Lab File ID:

% Moisture: 22 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/08/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	0.87	JP
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	0.23	JPB
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	2.2	U
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.2	U
72-55-9	4,4'-DDE	4.2	U
72-20-8	Endrin	1.4	J
33213-65-9	Endosulfan II	0.41	JP
72-54-8	4,4'-DDD	4.2	U
1031-07-8	Endosulfan sulfate	4.2	U
50-29-3	4,4'-DDT	4.2	U
72-43-5	Methoxychlor	1.4	JPB
53494-70-5	Endrin ketone	4.2	U
7421-93-4	Endrin aldehyde	0.68	JP
5103-71-9	alpha-Chlordane	2.2	U
5103-74-2	gamma-Chlordane	2.2	U
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	85	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY24

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477467

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR077467C51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/03/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	160	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.: CHY24

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477467

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR077467C51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/03/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY24

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477467

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077467A07

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 01/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY24

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477467

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077467A07

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 01/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-Methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY24

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477467

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH077467A07

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 01/31/92

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: CHY24

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477467

Sample wt/vol: 1000 (g/ml) ML Lab File ID:

% Moisture: decanted: (Y/N) Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/30/92

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 02/04/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.050	U
5103-74-2	gamma-Chlordane	0.050	U
8001-35-2	Toxaphene	5.0	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY25

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477468

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR077468C51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. Date Analyzed: 02/03/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	150	B
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	Trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

CHY25

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY02

Matrix: (soil/water) WATER Lab Sample ID: 477468

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CR077468C51

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. ____ Date Analyzed: 02/03/92

GC Column: DB-624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

ORIGINAL

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY26

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477495

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH077495C18

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: not dec. 32 Date Analyzed: 02/03/92

GC Column: DB624 ID: 0.530 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	83	B
67-64-1	Acetone	73	B
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	15	U
75-34-3	1,1-Dichloroethane	15	U
540-59-0	1,2-Dichloroethene (total)	15	U
67-66-3	Chloroform	15	U
107-06-2	1,2-Dichloroethane	15	U
78-93-3	2-Butanone	15	U
71-55-6	1,1,1-Trichloroethane	15	U
56-23-5	Carbon Tetrachloride	15	U
75-27-4	Bromodichloromethane	15	U
78-87-5	1,2-Dichloropropane	15	U
10061-01-5	cis-1,3-Dichloropropene	15	U
79-01-6	Trichloroethene	15	U
124-48-1	Dibromochloromethane	15	U
79-00-5	1,1,2-Trichloroethane	15	U
71-43-2	Benzene	15	U
10061-02-6	Trans-1,3-Dichloropropene	15	U
75-25-2	Bromoform	15	U
108-10-1	4-Methyl-2-Pentanone	15	U
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	15	U
79-34-5	1,1,2,2-Tetrachloroethane	15	U
108-88-3	Toluene	15	U
108-90-7	Chlorobenzene	15	U
100-41-4	Ethylbenzene	15	U
100-42-5	Styrene	15	U
1330-20-7	Xylene (total)	15	U

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CHY26

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477495

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GRJ77495A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 32 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	480	U
111-44-4	bis(2-Chloroethyl)Ether	480	U
95-57-8	2-Chlorophenol	480	U
541-73-1	1,3-Dichlorobenzene	480	U
106-46-7	1,4-Dichlorobenzene	480	U
95-50-1	1,2-Dichlorobenzene	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	480	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-Di-n-Propylamine	480	U
67-72-1	Hexachloroethane	480	U
98-95-3	Nitrobenzene	480	U
78-59-1	Isophorone	480	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	bis(2-Chloroethoxy)Methane	480	U
120-83-2	2,4-Dichlorophenol	480	U
120-82-1	1,2,4-Trichlorobenzene	480	U
91-20-3	Naphthalene	480	U
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	480	U
59-50-7	4-Chloro-3-Methylphenol	480	U
91-57-6	2-Methylnaphthalene	480	U
77-47-4	Hexachlorocyclopentadiene	480	U
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	1200	U
91-58-7	2-Chloronaphthalene	480	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethyl Phthalate	480	U
208-96-8	Acenaphthylene	480	U
606-20-2	2,6-Dinitrotoluene	480	U
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	480	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY26

Lab Name: COMPUCHEM.RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477495

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GRJ77495A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 32 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	480	U
121-14-2	2,4-Dinitrotoluene	480	U
84-66-2	Diethylphthalate	480	U
7005-72-3	4-Chlorophenyl-phenylether	480	U
86-73-7	Fluorene	480	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-Methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamine (1)	480	U
101-55-3	4-Bromophenyl-phenylether	480	U
118-74-1	Hexachlorobenzene	480	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	77	J
120-12-7	Anthracene	480	U
86-74-8	Carbazole	480	U
84-74-2	Di-n-Butylphthalate	480	U
206-44-0	Fluoranthene	170	J
129-00-0	Pyrene	99	J
85-68-7	Butylbenzylphthalate	480	U
91-94-1	3,3'-Dichlorobenzidine	480	U
56-55-3	Benzo(a)Anthracene	72	J
218-01-9	Chrysene	86	J
117-81-7	bis(2-Ethylhexyl)Phthalate	480	U
117-84-0	Di-n-Octyl Phthalate	480	U
205-99-2	Benzo(b)Fluoranthene	170	JX
207-08-9	Benzo(k)Fluoranthene	170	JX
50-32-8	Benzo(a)Pyrene	86	J
193-39-5	Indeno(1,2,3-cd)Pyrene	480	U
53-70-3	Dibenz(a,h)Anthracene	480	U
191-24-2	Benzo(g,h,i)Perylene	480	U

(1) - Cannot be separated from Diphenylamine

1F

EPA SAMPLE NO.

CHY26

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477495

Sample wt/vol: 30.4 (g/mL) G Lab File ID: GRJ77495A21

Level: (low/med) LOW Date Received: 01/29/92

% Moisture: 32 decanted: (Y/N) N Date Extracted: 02/04/92

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/12/92

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.3

Number TICs found: 23

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN ALKENE	4.30	190	J
2.		UNKNOWN	4.43	1500	J
3.		UNKNOWN	4.65	1100	J
4.		ALDOL	4.80	1400	ABJ
5.		ALDOL	4.92	390	AJ
6.		UNKNOWN	5.02	240	J
7.		UNKNOWN	5.25	1500	J
8.		UNKNOWN	5.90	2800	J
9.	57-10-3	HEXADECANOIC ACID	12.37	190	JN
10.		LABORATORY ARTIFACT	14.60	340	BJ
11.		UNKNOWN	15.12	240	J
12.		UNKNOWN	16.02	97	J
13.		UNKNOWN	16.05	240	J
14.		UNKNOWN	17.17	440	J
15.		UNKNOWN	17.24	290	J
16.		UNKNOWN	18.82	770	J
17.		UNKNOWN	20.47	3000	J
18.		UNKNOWN	20.49	1600	J
19.		UNKNOWN	21.50	820	J
20.		UNKNOWN	21.87	340	J
21.		UNKNOWN	21.94	190	J
22.		UNKNOWN	23.14	480	J
23.		UNKNOWN	23.42	190	J

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

CHY26

Lab Name: COMPUCHEM,RTP Contract: 68D10083

Lab Code: COMPU Case No.: 17744 SAS No.: 6579HQ SDG No.: CHY11

Matrix: (soil/water) SOIL Lab Sample ID: 477495

Sample wt/vol: 30.20 (g/ml) G Lab File ID:

% Moisture: 32 decanted: (Y/N) N Date Received: 01/29/92

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 02/03/92

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 02/08/92

Injection Volume: 2.0 (uL) Dilution Factor: 1

GPC Cleanup: (Y/N) Y pH: 6.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.5	U
319-85-7	beta-BHC	0.28	JP
319-86-8	delta-BHC	2.5	U
58-89-9	gamma-BHC (Lindane)	0.091	JP
76-44-8	Heptachlor	0.19	JPB
309-00-2	Aldrin	0.56	J
1024-57-3	Heptachlor epoxide	2.5	U
959-98-8	Endosulfan I	2.5	U
60-57-1	Dieldrin	0.26	JP
72-55-9	4,4'-DDE	0.80	JP
72-20-8	Endrin	3.3	J
33213-65-9	Endosulfan II	0.28	JP
72-54-8	4,4'-DDD	4.8	U
1031-07-8	Endosulfan sulfate	4.8	U
50-29-3	4,4'-DDT	0.92	JP
72-43-5	Methoxychlor	25	U
53494-70-5	Endrin ketone	4.8	U
7421-93-4	Endrin aldehyde	4.8	U
5103-71-9	alpha-Chlordane	2.5	U
5103-74-2	gamma-Chlordane	2.5	U
8001-35-2	Toxaphene	250	U
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	98	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE02

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301002

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	22.90	B	E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	10.80			F
7440-39-3	Barium	85.50	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	68700.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	5.00	B		P
7439-89-6	Iron	9.40	B	NE	P
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium	15100.00			P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	774.00	B		P
7782-49-2	Selenium	2.00	U	+	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	14700.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	14.40	B		P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE03

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301003

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15.10	B	E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	8.10	B		F
7440-39-3	Barium	248.00			P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	38700.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	188.00			P
7439-89-6	Iron	52.50	B	NE	P
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium	15300.00			P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	1000.00	B		P
7782-49-2	Selenium	2.00	U	S	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	21900.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	63.30			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE04

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301004

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	32.50	B	E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	5.80	B		F
7440-39-3	Barium	284.00			P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	48400.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	68.00			P
7439-89-6	Iron	21.90	B	NE	P
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium	16800.00			P
7439-96-5	Manganese	2.70	B		P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	1300.00	B		P
7782-49-2	Selenium	2.00	U	+	F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	17700.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	39.50			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE05

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301005

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	134.00	B	E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	6.80	B		F
7440-39-3	Barium	33.00	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	38000.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	5.50	B		P
7439-89-6	Iron	202.00		NE	P
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium	12400.00			P
7439-96-5	Manganese	123.00			P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	3030.00	B		P
7782-49-2	Selenium	2.00	B		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	23000.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	48.50			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE06

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301006

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	837.00		E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	7.20	B		F
7440-39-3	Barium	55.60	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	38900.00			P
7440-47-3	Chromium	3.70	B		P
7440-48-4	Cobalt	6.70	B		P
7440-50-8	Copper	23.80	B		P
7439-89-6	Iron	1380.00		NE	P
7439-92-1	Lead	19.00		S	F
7439-95-4	Magnesium	12700.00			P
7439-96-5	Manganese	507.00			P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	3300.00	B		P
7782-49-2	Selenium	2.00	B		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	22600.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	176.00			P
	Cyanide	11.70			AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE07

b Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301007

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1090.00		E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	7.20	B		F
7440-39-3	Barium	65.30	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	14500.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	5.00	B		P
7439-89-6	Iron	930.00		NE	P
7439-92-1	Lead	1.10	B		F
7439-95-4	Magnesium	5790.00			P
7439-96-5	Manganese	51.70			P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	2270.00	B		P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	6150.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	27.70			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: MCJE08

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301010

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1560.00		E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	8.90	B		F
7440-39-3	Barium	93.90	B		P
7440-41-7	Beryllium	1.10	B		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	44100.00			P
7440-47-3	Chromium	7.10	B		P
7440-48-4	Cobalt	29.00	B		P
7440-50-8	Copper	55.60			P
7439-89-6	Iron	3470.00		NE	P
7439-92-1	Lead	59.90			F
7439-95-4	Magnesium	14300.00			P
7439-96-5	Manganese	1210.00			P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	32.60	B		P
7440-09-7	Potassium	3770.00	B		P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	24100.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	6.40	B		P
7440-66-6	Zinc	301.00			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE09

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301011

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	119.00	B	E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	6.70	B		F
7440-39-3	Barium	30.30	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	33100.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	4.50	B		P
7439-89-6	Iron	132.00		NE	P
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium	10800.00			P
7439-96-5	Manganese	113.00			P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	2780.00	B		P
7782-49-2	Selenium	2.50	B		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	18800.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	76.00			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: MCJE10

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301012

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	266.00		E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	6.40	B		F
7440-39-3	Barium	33.80	B		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	37900.00			P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	6.40	B		P
7440-50-8	Copper	7.40	B		P
7439-89-6	Iron	547.00		NE	P
7439-92-1	Lead	2.70	B		F
7439-95-4	Magnesium	12400.00			P
7439-96-5	Manganese	379.00			P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	2620.00	B		P
7782-49-2	Selenium	3.30	B		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	22300.00			P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	61.40			P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE11

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302002

Level (low/med): LOW Date Received: 01/29/92

% Solids: 51.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6080.00			P
7440-36-0	Antimony	11.70	U		P
7440-38-2	Arsenic	7.00			F
7440-39-3	Barium	120.00			P
7440-41-7	Beryllium	1.10	B		P
7440-43-9	Cadmium	1.40	B		P
7440-70-2	Calcium	10200.00			P
7440-47-3	Chromium	31.60			P
7440-48-4	Cobalt	38.80			P
7440-50-8	Copper	74.20			P
7439-89-6	Iron	14900.00			P
7439-92-1	Lead	113.00			F
7439-95-4	Magnesium	5420.00			P
7439-96-5	Manganese	1340.00			P
7439-97-6	Mercury	0.29			CV
7439-02-0	Nickel	40.30			P
7440-09-7	Potassium	629.00	B		P
7782-49-2	Selenium	1.50	B		F
7440-22-4	Silver	0.78	U		P
7440-23-5	Sodium	203.00	B		P
7440-28-0	Thallium	0.78	U		F
7440-62-2	Vanadium	23.30			P
7440-66-6	Zinc	384.00			P
	Cyanide	0.98	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE12

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302003

Level (low/med): LOW Date Received: 01/29/92

% Solids: 50.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8190.00			P
7440-36-0	Antimony	11.90	U		P
7440-38-2	Arsenic	6.10			F
7440-39-3	Barium	118.00			P
7440-41-7	Beryllium	1.30	B		P
7440-43-9	Cadmium	1.40	B		P
7440-70-2	Calcium	4070.00			P
7440-47-3	Chromium	31.50			P
7440-48-4	Cobalt	32.90			P
7440-50-8	Copper	58.30			P
7439-89-6	Iron	17800.00			P
7439-92-1	Lead	6.30		S	F
7439-95-4	Magnesium	3110.00			P
7439-96-5	Manganese	1230.00			P
7439-97-6	Mercury	0.30			CV
7439-02-0	Nickel	40.40			P
7440-09-7	Potassium	560.00	B		P
7782-49-2	Selenium	0.79	U	+	F
7440-22-4	Silver	0.79	U		P
7440-23-5	Sodium	221.00	B		P
7440-28-0	Thallium	0.79	U		F
7440-62-2	Vanadium	22.80			P
7440-66-6	Zinc	288.00			P
	Cyanide	0.99	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE13

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302004

Level (low/med): LOW Date Received: 01/29/92

% Solids: 60.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12400.00			P
7440-36-0	Antimony	9.90	U		P
7440-38-2	Arsenic	7.80			F
7440-39-3	Barium	146.00			P
7440-41-7	Beryllium	2.20			P
7440-43-9	Cadmium	0.99	U		P
7440-70-2	Calcium	1800.00			P
7440-47-3	Chromium	19.30			P
7440-48-4	Cobalt	31.00			P
7440-50-8	Copper	61.00			P
7439-89-6	Iron	17500.00			P
7439-92-1	Lead	3.30		S	F
7439-95-4	Magnesium	2580.00			P
7439-96-5	Manganese	291.00			P
7439-97-6	Mercury	0.50			CV
7439-02-0	Nickel	55.20			P
7440-09-7	Potassium	869.00	B		P
7782-49-2	Selenium	0.96	B	W	F
7440-22-4	Silver	0.66	U		P
7440-23-5	Sodium	80.60	B		P
7440-28-0	Thallium	0.66	U		F
7440-62-2	Vanadium	23.20			P
7440-66-6	Zinc	299.00			P
	Cyanide	0.83	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE14

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302005

Level (low/med): LOW Date Received: 01/29/92

% Solids: 43.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10500.00			P
7440-36-0	Antimony	13.90	U		P
7440-38-2	Arsenic	3.80	B	S	F
7440-39-3	Barium	154.00			P
7440-41-7	Beryllium	2.10	B		P
7440-43-9	Cadmium	2.20	B		P
7440-70-2	Calcium	4560.00			P
7440-47-3	Chromium	43.20			P
7440-48-4	Cobalt	59.70			P
7440-50-8	Copper	105.00			P
7439-89-6	Iron	23000.00			P
7439-92-1	Lead	5.30		S	F
7439-95-4	Magnesium	3100.00			P
7439-96-5	Manganese	1540.00			P
7439-97-6	Mercury	0.35			CV
7439-02-0	Nickel	75.20			P
7440-09-7	Potassium	970.00	B		P
7782-49-2	Selenium	0.93	U	S	F
7440-22-4	Silver	0.93	U		P
7440-23-5	Sodium	195.00	B		P
7440-28-0	Thallium	0.93	U		F
7440-62-2	Vanadium	28.20			P
7440-66-6	Zinc	497.00			P
	Cyanide	1.20	U		AS

Color Before: DK.BROWN Clarity Before: Texture: COARSE

Color After: LT.YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE15

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302006

Level (low/med): LOW Date Received: 01/29/92

% Solids: 83.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6810.00			P
7440-36-0	Antimony	7.20	U		P
7440-38-2	Arsenic	372.00		S	F
7440-39-3	Barium	158.00			P
7440-41-7	Beryllium	0.70	B		P
7440-43-9	Cadmium	2.60			P
7440-70-2	Calcium	1270.00			P
7440-47-3	Chromium	29.10			P
7440-48-4	Cobalt	14.30			P
7440-50-8	Copper	42.70			P
7439-89-6	Iron	37700.00			P
7439-92-1	Lead	3.50		S	F
7439-95-4	Magnesium	1830.00			P
7439-96-5	Manganese	411.00			P
7439-97-6	Mercury	0.18			CV
7439-02-0	Nickel	20.90			P
7440-09-7	Potassium	822.00	B		P
7782-49-2	Selenium	2.40	U	S	F
7440-22-4	Silver	0.48	U		P
7440-23-5	Sodium	129.00	B		P
7440-28-0	Thallium	0.48	U		F
7440-62-2	Vanadium	41.10			P
7440-66-6	Zinc	1230.00			P
	Cyanide	0.68			AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE16

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302007

Level (low/med): LOW Date Received: 01/29/92

% Solids: 43.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2140.00			P
7440-36-0	Antimony	13.70	U		P
7440-38-2	Arsenic	62.40		+	F
7440-39-3	Barium	407.00			P
7440-41-7	Beryllium	0.55	B		P
7440-43-9	Cadmium	2.60			P
7440-70-2	Calcium	2220.00	B		P
7440-47-3	Chromium	63.90			P
7440-48-4	Cobalt	9.60	B		P
7440-50-8	Copper	71.50			P
7439-89-6	Iron	39000.00			P
7439-92-1	Lead	4810.00			F
7439-95-4	Magnesium	784.00	B		P
7439-96-5	Manganese	464.00			P
7439-97-6	Mercury	2.90			CV
7439-02-0	Nickel	10.60	B		P
7440-09-7	Potassium	330.00	U		P
7782-49-2	Selenium	0.92	U		F
7440-22-4	Silver	0.92	U		P
7440-23-5	Sodium	52.40	B		P
7440-28-0	Thallium	0.92	U		F
7440-62-2	Vanadium	26.50			P
7440-66-6	Zinc	651.00			P
	Cyanide	1.80			AS

Color Before: BLACK Clarity Before: Texture: COARSE

Color After: LT.YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE17

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302008

Level (low/med): LOW Date Received: 01/29/92

% Solids: 81.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4970.00			P
7440-36-0	Antimony	7.30	U		P
7440-38-2	Arsenic	3.90		S	F
7440-39-3	Barium	80.60			P
7440-41-7	Beryllium	0.71	B		P
7440-43-9	Cadmium	0.73	U		P
7440-70-2	Calcium	1520.00			P
7440-47-3	Chromium	12.40			P
7440-48-4	Cobalt	8.60	B		P
7440-50-8	Copper	15.40			P
7439-89-6	Iron	12800.00			P
7439-92-1	Lead	1.90		S	F
7439-95-4	Magnesium	1040.00	B		P
7439-96-5	Manganese	811.00			P
7439-97-6	Mercury	0.12	U		CV
7439-02-0	Nickel	9.80	B		P
7440-09-7	Potassium	782.00	B		P
7782-49-2	Selenium	0.71	B	W	F
7440-22-4	Silver	0.49	U		P
7440-23-5	Sodium	64.50	B		P
7440-28-0	Thallium	0.49	U		F
7440-62-2	Vanadium	15.70			P
7440-66-6	Zinc	200.00			P
	Cyanide	0.61	U		AS

Color Before: RED-BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE18

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302009

Level (low/med): LOW Date Received: 01/29/92

% Solids: 76.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3400.00			P
7440-36-0	Antimony	7.90	U		P
7440-38-2	Arsenic	6.70			F
7440-39-3	Barium	52.70			P
7440-41-7	Beryllium	0.51	B		P
7440-43-9	Cadmium	0.79	U		P
7440-70-2	Calcium	2110.00			P
7440-47-3	Chromium	10.60			P
7440-48-4	Cobalt	6.40	B		P
7440-50-8	Copper	10.00			P
7439-89-6	Iron	10800.00			P
7439-92-1	Lead	182.00			F
7439-95-4	Magnesium	937.00	B		P
7439-96-5	Manganese	318.00			P
7439-97-6	Mercury	0.13	U		CV
7439-02-0	Nickel	7.40	B		P
7440-09-7	Potassium	397.00	B		P
7782-49-2	Selenium	0.63	B	W	F
7440-22-4	Silver	0.53	U		P
7440-23-5	Sodium	43.50	B		P
7440-28-0	Thallium	0.53	U		F
7440-62-2	Vanadium	19.60			P
7440-66-6	Zinc	169.00			P
	Cyanide	0.66	U		AS

Color Before: RED-BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE19

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302012

Level (low/med): LOW Date Received: 01/29/92

% Solids: 83.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4170.00			P
7440-36-0	Antimony	7.20	U		P
7440-38-2	Arsenic	5.40			F
7440-39-3	Barium	66.00			P
7440-41-7	Beryllium	0.58	B		P
7440-43-9	Cadmium	0.72	U		P
7440-70-2	Calcium	1620.00			P
7440-47-3	Chromium	8.10			P
7440-48-4	Cobalt	7.50	B		P
7440-50-8	Copper	7.10			P
7439-89-6	Iron	9880.00			P
7439-92-1	Lead	16.90			F
7439-95-4	Magnesium	1140.00	B		P
7439-96-5	Manganese	351.00			P
7439-97-6	Mercury	0.12	U		CV
7439-02-0	Nickel	7.10	B		P
7440-09-7	Potassium	483.00	B		P
7782-49-2	Selenium	0.60	B		F
7440-22-4	Silver	0.48	U		P
7440-23-5	Sodium	115.00	B		P
7440-28-0	Thallium	0.48	U		F
7440-62-2	Vanadium	12.30			P
7440-66-6	Zinc	201.00			P
	Cyanide	0.60	U		AS

Color Before: RED-BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE20

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302013

Level (low/med): LOW Date Received: 01/29/92

% Solids: 64.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	3760.00			P
7440-36-0	Antimony	9.30	U		P
7440-38-2	Arsenic	9.00			F
7440-39-3	Barium	80.90			P
7440-41-7	Beryllium	0.53	B		P
7440-43-9	Cadmium	1.10	B		P
7440-70-2	Calcium	12400.00			P
7440-47-3	Chromium	38.60			P
7440-48-4	Cobalt	8.80	B		P
7440-50-8	Copper	81.70			P
7439-89-6	Iron	10300.00			P
7439-92-1	Lead	253.00			F
7439-95-4	Magnesium	4750.00			P
7439-96-5	Manganese	437.00			P
7439-97-6	Mercury	0.23			CV
7439-02-0	Nickel	10.70	B		P
7440-09-7	Potassium	534.00	B		P
7782-49-2	Selenium	0.96	B	W	F
7440-22-4	Silver	0.62	U		P
7440-23-5	Sodium	63.40	B		P
7440-28-0	Thallium	0.62	U		F
7440-62-2	Vanadium	12.70	B		P
7440-66-6	Zinc	226.00			P
	Cyanide	0.77	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE21

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302014

Level (low/med): LOW Date Received: 01/29/92

% Solids: 74.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5090.00			P
7440-36-0	Antimony	11.00	B		P
7440-38-2	Arsenic	33.30		S	F
7440-39-3	Barium	268.00			P
7440-41-7	Beryllium	0.65	B		P
7440-43-9	Cadmium	2.30			P
7440-70-2	Calcium	17600.00			P
7440-47-3	Chromium	45.10			P
7440-48-4	Cobalt	14.80			P
7440-50-8	Copper	388.00			P
7439-89-6	Iron	67800.00			P
7439-92-1	Lead	358.00			F
7439-95-4	Magnesium	4860.00			P
7439-96-5	Manganese	801.00			P
7439-97-6	Mercury	0.33			CV
7439-02-0	Nickel	56.50			P
7440-09-7	Potassium	1100.00	B		P
7782-49-2	Selenium	0.53	U	W	F
7440-22-4	Silver	0.53	U		P
7440-23-5	Sodium	219.00	B		P
7440-28-0	Thallium	0.53	U		F
7440-62-2	Vanadium	73.10			P
7440-66-6	Zinc	1150.00			P
	Cyanide	0.67	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.YELLOW Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE22

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302015

Level (low/med): LOW Date Received: 01/29/92

% Solids: 74.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5470.00			P
7440-36-0	Antimony	8.00	U		P
7440-38-2	Arsenic	10.40			F
7440-39-3	Barium	113.00			P
7440-41-7	Beryllium	0.78	B		P
7440-43-9	Cadmium	0.80	U		P
7440-70-2	Calcium	2670.00			P
7440-47-3	Chromium	8.20			P
7440-48-4	Cobalt	8.70	B		P
7440-50-8	Copper	17.00			P
7439-89-6	Iron	11600.00			P
7439-92-1	Lead	22.20		W	F
7439-95-4	Magnesium	1070.00	B		P
7439-96-5	Manganese	469.00			P
7439-97-6	Mercury	0.13	U		CV
7439-02-0	Nickel	12.70			P
7440-09-7	Potassium	483.00	B		P
7782-49-2	Selenium	0.72	B	W	F
7440-22-4	Silver	0.53	U		P
7440-23-5	Sodium	91.00	B		P
7440-28-0	Thallium	0.53	U		F
7440-62-2	Vanadium	19.80			P
7440-66-6	Zinc	286.00			P
	Cyanide	0.67	U		AS

Color Before: RED-BROWN Clarity Before: Texture: COARSE

Color After: LT.BROWN Clarity After: Artifacts:

Comments:

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MCJE23

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302016

Level (low/med): LOW Date Received: 01/29/92

% Solids: 77.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8230.00			P
7440-36-0	Antimony	7.80	U		P
7440-38-2	Arsenic	5.60			F
7440-39-3	Barium	111.00			P
7440-41-7	Beryllium	1.00	B		P
7440-43-9	Cadmium	0.78	U		P
7440-70-2	Calcium	1730.00			P
7440-47-3	Chromium	15.20			P
7440-48-4	Cobalt	11.10	B		P
7440-50-8	Copper	20.10			P
7439-89-6	Iron	20000.00			P
7439-92-1	Lead	20.20			F
7439-95-4	Magnesium	1890.00			P
7439-96-5	Manganese	1090.00			P
7439-97-6	Mercury	0.13	U		CV
7439-02-0	Nickel	14.40			P
7440-09-7	Potassium	883.00	B		P
7782-49-2	Selenium	0.52	U		F
7440-22-4	Silver	0.52	U		P
7440-23-5	Sodium	41.10	B		P
7440-28-0	Thallium	0.52	U		F
7440-62-2	Vanadium	31.50			P
7440-66-6	Zinc	61.80			P
	Cyanide	0.65	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.YELLOW Clarity After: Artifacts:

Comments:

KEYSTONE D.C.# 17744-3-3

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.: MCJE24

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE02

Matrix (soil/water): WATER Lab Sample ID: 9201301013

Level (low/med): LOW Date Received: 01/29/92

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): ug/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15.10	B	E	P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	5.40	B		F
7440-39-3	Barium	1.00	U		P
7440-41-7	Beryllium	1.00	U		P
7440-43-9	Cadmium	3.00	U		P
7440-70-2	Calcium	29.10	B		P
7440-47-3	Chromium	3.00	U		P
7440-48-4	Cobalt	4.00	U		P
7440-50-8	Copper	3.00	U		P
7439-89-6	Iron	12.50	B	NE	P
7439-92-1	Lead	1.00	U		F
7439-95-4	Magnesium	42.60	B		P
7439-96-5	Manganese	2.00	U		P
7439-97-6	Mercury	0.20	U		CV
7439-02-0	Nickel	22.00	U		P
7440-09-7	Potassium	722.00	U		P
7782-49-2	Selenium	2.00	U		F
7440-22-4	Silver	2.00	U		P
7440-23-5	Sodium	30.00	U		P
7440-28-0	Thallium	2.00	U		F
7440-62-2	Vanadium	4.00	U		P
7440-66-6	Zinc	15.80	B		P
	Cyanide	10.00	U		AS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

U.S. EPA - CLP

1
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
MCJE26

Lab Name: KEYSTONE LAB-HOUSTON Contract: 68-D0-0147

Lab Code: KEYTX Case No.: 17744 SAS No.: SDG No.: MCJE11

Matrix (soil/water): SOIL Lab Sample ID: 9201302017

Level (low/med): LOW Date Received: 01/29/92

% Solids: 67.9

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6790.00			P
7440-36-0	Antimony	8.80	U		P
7440-38-2	Arsenic	3.40		W	F
7440-39-3	Barium	44.60	B		P
7440-41-7	Beryllium	0.72	B		P
7440-43-9	Cadmium	0.88	U		P
7440-70-2	Calcium	382.00	B		P
7440-47-3	Chromium	14.20			P
7440-48-4	Cobalt	9.80	B		P
7440-50-8	Copper	13.50			P
7439-89-6	Iron	18100.00			P
7439-92-1	Lead	17.80			F
7439-95-4	Magnesium	1250.00	B		P
7439-96-5	Manganese	366.00			P
7439-97-6	Mercury	0.15	U		CV
7439-02-0	Nickel	10.70	B		P
7440-09-7	Potassium	582.00	B		P
7782-49-2	Selenium	0.82	B	M	F
7440-22-4	Silver	0.59	U		P
7440-23-5	Sodium	32.10	B		P
7440-28-0	Thallium	0.59	U		F
7440-62-2	Vanadium	27.20			P
7440-66-6	Zinc	129.00			P
	Cyanide	0.74	U		AS

Color Before: BROWN Clarity Before: Texture: COARSE

Color After: LT.YELLOW Clarity After: Artifacts:

Comments:

APPENDIX C

HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: _____

Address: (b) (6) Home Phone: (b) (6)

Work Phone: _____

1 Please describe the type of home well you presently utilize:
(Check those which apply)

____ Dug well

__x__ Drilled by a rig; if so, please identify company (name, address, and phone):
Gerber - Sassamansville

____ Other (describe) _____

1a. Please estimate the following: Year installed unknown

Date of last service 6 to 8 yr

Company who serviced (name, address, and phone): new pump

2. Please provide the following measurements of your well:

a. (b) (9)

b.

3. Please describe the casing material used in your well:

a. Composition

__x__ Iron ____ PVC ____ Galvanized ____ Terra Cotta

____ Other - Please Specify (if known)

b. Length (if known): unk

HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: _____

4 Please describe, if known, any screening material used in your well:

a. Length of screen: _____

b. Depth of screen in well: _____

5. Please indicate, if known, the depth to the groundwater in your well (from the surface):

unknown

6. Please indicate the composition of home plumbing (pipes) in your system:

_____ Iron _____ PVC _____ Galvanized _____ Lead

✓ Other (describe): copper

7. Please describe the water pump used in your system:

a. Location of the pump

✓ Inside the well (submersible pump); Depth in well: _____

_____ Outside the well (indicate location): _____

b. Type of pump

Branch (if known): _____

Capacity (gallons per minute): _____

c. Estimate hours of pump operation per day: _____

d. Is storage tank used: ✓ Yes _____ No

Type (material) unknown Capacity _____

8. a. Do you regularly or have you ever added chemicals directly to your well?

(i.e., chlorine, clorox, etc.) _____ Yes ✓ No

If yes, date last added: _____ Approximate amount added _____

Compound (brand name): _____

HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: _____

b. Please describe any type of water treatment you are currently using (check those which apply):

_____ Filtration — _____ Other (explain)

Type: _____ — none

_____ Water Softeners

Indicate Brand: _____

9. Please indicate any testing that has been done on your water:

Date of testing: none

Name of individual(s) responsible for testing: _____

10. Well Use: ✓ Drinking ✓ Other: household

11. Do you notice color, taste, or odor problems with well water? _____ Yes ✓ No

If yes, identify: _____

Do you notice water supply problems? _____ Yes ✓ No

If yes, when: _____ how often: _____

12. Please indicate the type(s) of wastewater system used (check):

Sewer Line ✓

Septic Tank _____ Cesspool _____ Drain Field _____

Distance to Well _____

13. We may be taking water samples from many area homes in the near future. If your well is chosen for sampling, would you be willing to allow our NUS representatives to sample your well? Sampling involves collecting water from one of your indoor or outdoor spigots.

✓ Yes, I will allow my well to be sampled.

_____ No, I will not allow my well to be sampled.

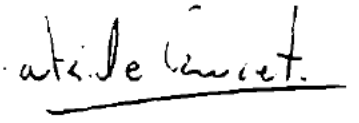
HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: _____

If yes, please indicate the time of day which would be convenient for us to sample.

_____ Morning _____ Afternoon _____ Evening

14. In the space below, please furnish a rough sketch of your property, indicating the location of your well and on-lot wastewater system, if applicable. Also indicate the location of the spigot you would prefer us to sample.



HW-2

HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: 1/28/92

Address: (b) (6) Home Phone: (b) (6)

Work Phone: _____

1. Please describe the type of home well you presently utilize:
(Check those which apply)

_____ Dug well

✓ Drilled by a rig; if so, please identify company (name, address, and phone):

_____

_____

_____

_____ Other (describe) _____

1a. Please estimate the following: Year installed _____

Date of last service 6 5

Company who serviced (name, address, and phone): _____

_____

_____

2. Please provide the following measurements of your well:

a. (b) (9)

b.

3. Please describe the casing material used in your well:

a. Composition

_____ Iron ✓ PVC _____ Galvanized _____ Terra Cotta

_____ Other - Please Specify (if known)

b. Length (if known): _____

HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: _____

4. Please describe, if known, any screening material used in your well:

   a. Length of screen: _____

   b. Depth of screen in well: _____

5. Please indicate, if known, the depth to the groundwater in your well (from the surface):

   55

6. Please indicate the composition of home plumbing (pipes) in your system:

   ✓ Iron ____ PVC ____ Galvanized ____ Lead

   ____ Other (describe): _____

7. Please describe the water pump used in your system:

   a. Location of the pump

   ✓ Inside the well (submersible pump); Depth in well: _____

   ____ Outside the well (indicate location): _____

   b. Type of pump

   Branch (if known): _____

   Capacity (gallons per minute): _____

   c. Estimate hours of pump operation per day: _____

   d. Is storage tank used: ✓ Yes ____ No

   Type (material) _____ Capacity 50

8. a. Do you regularly or have you ever added chemicals directly to your well?

   (i.e., chlorine, clorox, etc.) ____ Yes ✓ No

   If yes, date last added: _____ Approximate amount added _____

   Compound (brand name): _____

HOME WELL SURVEY

Home Owner's Name: (b) (6) Date: _____

b. Please describe any type of water treatment you are currently using (check those which apply):

_____ Filtration
Type: _____

_____ Water Softeners
Indicate Brand: _____

_____ Other (explain)
_____
_____
_____

9. Please indicate any testing that has been done on your water:

Date of testing: _____
Name of individual(s) responsible for testing: _____

10. Well Use: ✓ Drinking _____ Other: _____

11. Do you notice color, taste, or odor problems with well water? _____ Yes ✓ No
If yes, identify: _____

Do you notice water supply problems? _____ Yes ✓ No
If yes, when: _____ how often: _____

12. Please indicate the type(s) of wastewater system used (check):
Sewer Line ✓
Septic Tank _____ Cesspool _____ Drain Field _____
Distance to Well _____

13. We may be taking water samples from many area homes in the near future. If your well is chosen for sampling, would you be willing to allow our NUS representatives to sample your well? Sampling involves collecting water from one of your indoor or outdoor spigots.

_____ Yes, I will allow my well to be sampled.
_____ No, I will not allow my well to be sampled.

HOME WELL SURVEY

Home Owner's Name: (b) (6) [redacted] Date: _____

If yes, please indicate the time of day which would be convenient for us to sample.

_____ Morning _____ Afternoon _____ Evening

14. In the space below, please furnish a rough sketch of your property, indicating the location of your well and on-lot wastewater system, if applicable. Also indicate the location of the spigot you would prefer us to sample.

PLATE 1

EPA REGION III
SUPERFUND DOCUMENT MANAGEMENT SYSTEM

DOC ID # 404788
PAGE # _____

IMAGERY COVER SHEET
UNSCANNABLE ITEM

Contact the CERCLA Records Center to view this document.

SITE NAME Linfield Industrial
OPERABLE UNIT 00
SECTION/BOX/FOLDER IC - 1 - 1.002

REPORT OR DOCUMENT TITLE Final Screening Site Inspection
DATE OF DOCUMENT Sept. 1, 1992
DESCRIPTION OF IMAGERY Four Mile Radius MAP
NUMBER AND TYPE OF IMAGERY ITEM(S) 1 oversized MAP